

Offshore Marine



Keppel

A publication of Keppel Offshore & Marine

September/October 2006

MICA (P) 239/05/2006

Offshore
Third semi order
from ENSCO

Milestones at
Keppel yards

Marine
New conversions and
constructions

Keppel launches Kazakhstan's first barge
Flying high with onsite repairs



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OSEA 2006

Discover the frontiers of technology at the 16th Offshore South East Asia 2006 (OSEA 2006) exhibition and international conference. Held at Suntec Singapore from 5 to 8 December 2006, it is a leading platform for the Asian oil and gas and production industry.

Check out the Keppel Offshore & Marine booth at 4K2-01 which will showcase the latest achievements and technology in the industry.

The conference is open to registered guests only. For more information about OSEA, visit <http://www.osea-asia.com>.

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Company registration no. 199900642R

ENSCO awards third semi rig to Keppel FELS

Keppel FELS has secured a repeat order for an ultra-deepwater semisubmersible (semi) drilling rig from a wholly-owned subsidiary of ENSCO International Incorporated (ENSCO).

To be named *ENSCO 8502*, the semi is scheduled for delivery by the end of 2009.

Choo Chiau Beng (CB Choo), Chairman & CEO of Keppel Offshore & Marine (Keppel O&M), the parent company of Keppel FELS, said, "For the last six years, we have been building one rig a year for ENSCO. In the past 12 months, we are happy to have secured three new semi orders from them.

"This speaks of a strong vote of confidence in Keppel FELS and of the successful partnership that our two companies have established over the years."

Carl F. Thorne, ENSCO's Chairman and CEO, commented, "We are very pleased that all of our rig construction projects with Keppel FELS are on schedule and within budget.

"We are committed to our long-term strategy of increasing our deepwater rig fleet. We remain confident with regard to the offshore market, particularly in the deep and ultra-deepwater sectors. To meet the anticipated growing demand for efficient ultra-deepwater drilling equipment, we have decided to commission the construction of our third 8500 Series™ semi with Keppel FELS."

This rig is similar to the first two semis, *ENSCO 8500* and *ENSCO 8501*, which will be delivered in second quarter of 2008 and first quarter of 2009 respectively. Keppel FELS is also building an ultra-high specification jackup rig, *ENSCO 108*, for ENSCO, and this rig is scheduled for delivery in the second quarter of 2007. All three rigs have firm drilling contracts.



An artist's impression of
EnSCO 8500 series™
of semisubmersibles

Like her sister rigs, the *ENSCO 8502* semisubmersible rig which is based on an ENSCO proprietary design, will have the capability of drilling in water depths of up to 8,500 ft, and can be readily upgraded to 10,000 ft water-depth if required. Each rig is fitted with a DPS2 dynamic positioning system, eight 2600KW thrusters and a single conventional two million pound quad drilling derrick system, with accommodation for up to 150 persons.

Inside Keppel AmFELS



Offshore Courageous (front) and Offshore Defender are two of the five jackups Keppel AmFELS is building for Scorpion Drilling

Keppel AmFELS is hustling and bustling with activities. The shipyard in the Gulf of Mexico has in hand ten newbuildings and several repair projects

Five of the newbuilds are jackups for Scorpion Drilling, one jackup for Atwood Oceanics and another for Diamond Offshore. It is in the process of completing a sludge vessel for the New York City's Department of Environmental Protection.

Keppel AmFELS has completed its part of the work on two living quarter platforms for the Keppel SLP Consortium. These platforms are being built for PEMEX Exploración y Producción, a subsidiary of Mexican national oil company Petróleos Mexicanos (PEMEX).

Scorpion Drilling

The five jackups that Keppel AmFELS has secured from Scorpion Drilling are of the LeTourneau Super 116 design. The yard's scope of work includes detailed engineering and construction.

These rigs will be named *Offshore Courageous*, *Offshore Defender*, *Offshore Resolute*, *Offshore Vigilant* and *Offshore Intrepid*.

The first rig of the fleet, *Offshore Courageous*, is about 75% complete. As of mid-October 2006, the rig has been skidded out to the launch-way in preparation for its launching next month. Its delivery is expected in the second quarter of 2007.

Work is ongoing for the other four jackup rigs, with expected on-time completion between the fourth quarter of 2007 and 2008.

These rigs are capable of operating in water depths of 350 feet and drilling down to 30,000 feet. They are suited for both international operations as well as deep gas drilling in the Gulf of Mexico.

Keppel AmFELS had previously constructed rigs based on the LeTourneau Super 116 design. They include *ENSCO 74* and *ENSCO 75* (previously known as *Chiles Columbus* and *Chiles Magellan*), both of which are currently operating successfully in the Gulf of Mexico.

Diamond Offshore

Diamond Offshore has ordered two high-performance KFELS Super B Class premium jackup rigs from Keppel.

One of them *Ocean Shield*, is being built in Keppel FELS and the other, *Ocean Scepter*, at Keppel AmFELS.

When completed, both rigs will be capable of operating in water up to 350-foot deep and drilling to depths of up to 35,000 feet with a hook load capacity of two million pounds and a cantilever reach of 70 feet.

The engineering work and procurement for *Ocean Scepter* have been concluded, while construction is well underway, with the rig approximately 30% complete.

The first spud can for the rig will soon be installed, and Diamond Offshore can look forward to the on-time delivery of *Ocean Scepter* in end-2007.

Over in Singapore, the modules for *Ocean Shield* are currently being assembled according to schedule. Delivery of the unit is expected in first quarter-2008.

Atwood Oceanics

Atwood Aurora, as she will be named after completion, is a LeTourneau Super 116 E jackup rig that Keppel AmFELS is building for Atwood Oceanics.

Contracted in early-2006, the project is currently in its engineering and procurement phase. Major equipment and steel are being procured concurrently with work detailed engineering work for the rig.

Keppel AmFELS is planning to cut steel for *Atwood Aurora* in the first week of November 2006. Her delivery is due in the third quarter of 2008 when she will then join the rest of Atwood's fleet of drilling rigs.

New York City

In 2005, Keppel AmFELS signed an agreement with the City of New York Department of Environmental Protection to undertake the design, engineering and construction of a sludge vessel, *Red Hook*. This is the yard's second project awarded by the City of New York.

Design and engineering of the custom-built 150,000 cubic foot vessel took place across two locations.

Keppel AmFELS undertook the design and engineering of the vessel's outfitting, mechanical, piping and electrical components while Keppel FELS Baltech in Bulgaria developed parts of the naval architecture and hull structural design and documentation.

Construction of *Red Hook's* middle section has been completed. Erection of the stern block is currently in progress.

US-based subcontract yard, Alabama Shipyard, is fabricating the curved steel panel and frames for the ship. To date, over 120 tonnes of such panels have been delivered and assembled.

Assembly of *Red Hook* is expected to be completed in end-2006. She will then be in dock during the first half of 2007, before her sea trial and delivery in end-2007.



Left: *Ocean Scepter*, a KFELS Super B Class jackup rig, takes shape

Right: Measuring 150,000 cubic feet, *Red Hook* is a custom-built sludge vessel for New York City

P-51 takes shape

Over 60% completed, Keppel FELS Brasil is on-track with the construction of one of the world's largest floating production units (FPU), the *P-51*. This project bears the hallmark of vigilance, tremendous teamwork, excellent safety standards and technical expertise.

Vigilance

The Brazilians have a saying that 'the eye of the owner makes the chicken fat'. As the world's largest exporter of poultry, it is an adage Brazilian farmers abide by.

In a similar vein, Project Director José Pedro Mota too has been vigilantly overseeing his "chicken"—the construction of *P-51*.

José shared, "*P-51* is a mega project that requires massive effort. Therefore, I have to keep my eyes open and my senses alert at all times."

Unlike its sister vessel *P-52*, whose lower hull was built in Singapore and the upper hull in Brazil, the construction of *P-51* is completely undertaken in Brazil, except for the four 1,000-

tonne column nodes which were completed by Keppel FELS in Singapore in December 2005.

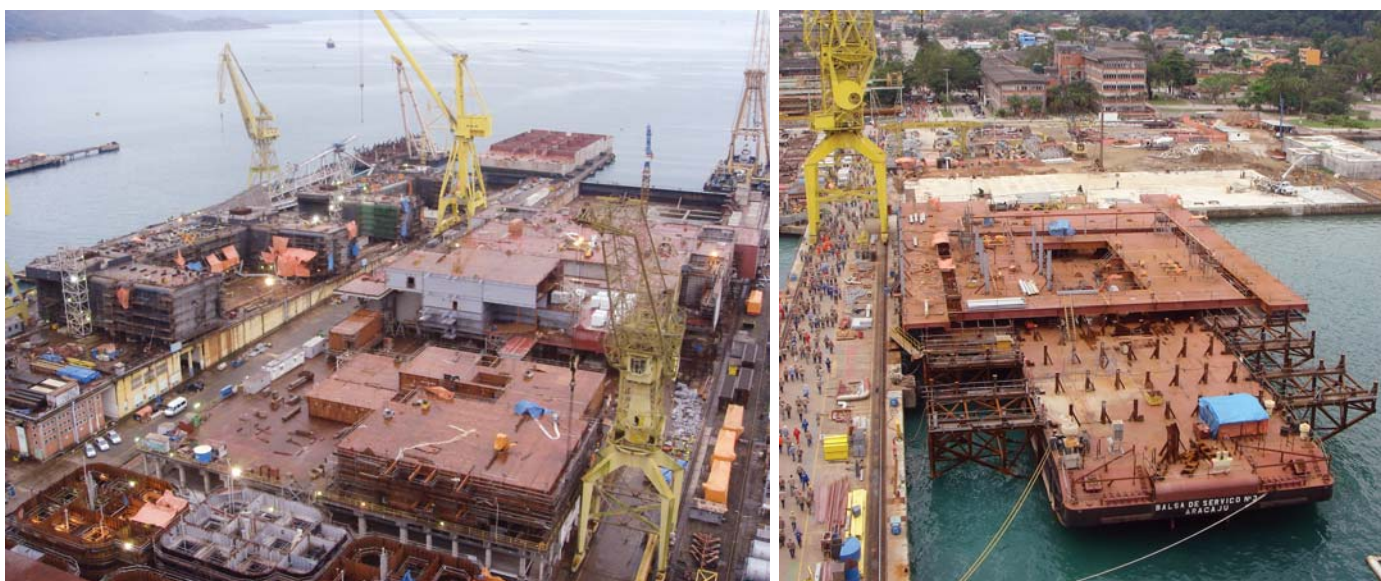
"There is a sense of excitement and pride in BrasFELS. From my recollection, Brazil has never built a complete FPU before due to the lack of technology. *P-51* will be the first and this is a significant milestone in our nation's history", said a beaming José.

Tremendous teamwork

The construction of *P-51* takes place across three locations in Brazil.

Keppel's BrasFELS yard in Angra dos Reis will undertake the building of the lower hull, deck box and accommodation; integration of the lower hull; as well the commissioning and pre-operations start-up for *P-51*.

Assembly of the lower hull, deckbox and spiderdeck is ongoing. When ready, the deckbox will be skidded over the floating barge, *FS-1*, in end-2006 before installation of the process modules commences. Both the deckbox



Taking shape at the Keppel's BrasFELS yard are the two 'C' sections (extreme left), accommodation blocks and deckbox (right)

and spiderdeck will then be joined in early-2007.

Over at Keppel FELS Brasil's Niteroi facility, the yard is busy manufacturing four topside modules for the *P-51* FPU. The first and second levels for two of the modules has been assembled. At the same time, construction of the first floor structural blocks for the other modules is underway.

Meanwhile, sub-contractor Nuclep is responsible for building the 16 pontoon blocks and seven of the 12 column blocks, plus four topside corner blocks. Work on the pontoon blocks are in progress and these will be welded before they are coupled to the column nodes. These blocks will then be transported to the BrasFELS yard to form parts of the two 'C' sections of the lower hull.

Once completed, BrasFELS will undertake the integration of the two 'C' sections to form the complete ring pontoon of the lower hull in the last quarter of 2006. Both sections will be floated, undocked and mated, using the temporary cofferdams method similar to that of *P-52* in Singapore.

Said José, "There are so much exciting things happening on *P-51*. The journey is tough, but what keeps the team going is the end result – a megastructure that is built almost completely in Brazil!"

Thankfully, the team has *P-52* as a learning model. With *P-51*'s construction about a year after *P-52*'s, the team has gleaned valuable "do's and don'ts" to further improve the construction of *P-51*. Brazilians were also sent to Singapore to understudy the construction of the lower hull of *P-52*.

"Our Brazilians guys benefited tremendously from their trip to Singapore. The exchange of ideas and transfer of technology will be very constructive to the successful completion of *P-51*", José commented.



Keppel FELS Brasil's Niteroi yard is undertaking the construction of *P-51*'s four topside modules.

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"Your devotion has been fundamental to this major accomplishment," Petrobras' Marina Fachetti Barbosa (left) to workers at BrasFELS

◀ Continued from page 7

Excellent safety standards

Wit and skills alone are not enough to see through this mammoth project.

José was quick to mention the most crucial factor that will see the success of *P-51* is safety. He shared, "We can plan all we want and work very hard to complete the project, but if safe practices are not instilled and followed, then everything that we do is in vain!

"That is why I make it a point to spend time every week walking and talking to our people on the ground. Nothing beats finding out issues they face at work and working with them to find the best and safest solution to their problems."

José's efforts have certainly paid off. In September 2006, the *P-51* team was lauded for achieving four million manhours without loss time incident for work at the BrasFELS yard and Nuclep facility.

Petrobras' *P-51* Project Director and Marlim Sul Fields Asset Manager (Engineering) Marina Fachetti Barbosa congratulated the team personally in an award presentation ceremony witnessed by thousands of yard workers.

A plaque presented to the *P-51* team at the BrasFELS yard, reads, "We (Petrobras) thank FSTP and BrasFELS for attaining this milestone in the *P-51* job at Angra dos Reis and Nuclep.

"Your devotion has been fundamental to this major accomplishment."

Looking ahead

Come 2007, major milestones are expected to be charted, including the offshore mating of the upper and lower hulls and integration of topside modules.

Similar to *P-52*, the offshore mating for *P-51* is considered one of the most challenging phases in the project. To be carried out in three stages, the first entails placing the deck box and modules onto the lower hull structure. After which, the spider deck will be hoisted to the topside before installation of the burner tower.

For now, the *P-51* team is hard at work as they remain committed and focused on completing a quality FPU for Petrobras.

Petrobras President previews P-53

Keppel O&M welcomed valued customer Petrobras to Keppel Shipyard on 1 September 2006. Led by its President, José Sergio

Gabrielli, the delegation was hosted by CB Choo.

On the tour of the yard, they witnessed

firsthand the progress of their project, P-53, which is undergoing a hull conversion as well as the fabrication and integration of the largest ever internal turret in the world with 75 risers.



José Sergio Gabrielli (centre) with CB Choo (right) and the Keppel and Petrobras teams

Impressed with what he saw in the yards, Gabrielli said, "Petrobras and Keppel O&M enjoy a very good relationship. The efficiency, the safety and the service of the people in the yards is a very heartening sight. I am happy with the progress of the Petrobras projects and I believe that our close partnership will deliver quality vessels for our needs."

Currently, the group is also building Petrobras' P-51 and P-52 production platforms through a consortium comprising Keppel FELS Brasil, Keppel FELS and Technip.

ReFit for the Royal Fleet

Keppel Shipyard has successfully completed the refitting of RFA *Bayleaf*, a fleet support tanker of the United Kingdom's Royal Fleet Auxiliary (RFA) Service. It is a civilian-manned fleet owned by the British Ministry of Defence.

The 170.7m long vessel was at Keppel Shipyard Gul Yard for three months for major works. Her scope of works included overhauling of cargo valves and the main engine, renewal of her cargo hydraulic system piping, coating of external and interior of the vessel as well as accommodation carpentry works.

This was not the first time the UK RFA called on Keppel Shipyard to service its vessels. In 2003, Keppel Shipyard also carried out a major refit job for the RFA



(From left) Capt. Graham Turner of RFA Engineering Fleet HQ and Commodore M. Norfolk, RFA SIPT, with Nelson Yeo, ED of Keppel Shipyard and John Syvret, MD of Northwestern Shiprepairers and Shipbuilders Ltd (NSL)

Bayleaf following the extended survey and repair of the landing ship RFA *Sir Tristram* in May the same year.

In addition, Keppel Singmarine was also awarded a major refit job by the RFA

Service that year for RFA *Diligence*. With a displacement of 10,765 tonnes, RFA *Diligence* was the third vessel awarded to Keppel Singmarine by the same owner in open competition.

Keppel Singmarine going full throttle

Riding on the crest of its numerous newbuilding projects, Keppel Singmarine has been charting significant milestones in the last few months.

One of the world's leading specialised shipbuilders, Keppel Singmarine has delivered 10 offshore support vessels and tugboats to-date this year to customers such as Bourbon Offshore, Hadi H. Al-Hamman Establishment, Keppel Smit Towage, Smit Transport & Heavy Lift and Zamil.

14 vessels are currently under construction at Keppel Singmarine, and eight at Keppel Nantong Shipyard.

Project achievements for its offshore support vessels (OSVs) and tugs include five deliveries, three launchings, two keel layings and one strike steel.

The deliveries

Keppel Singmarine's early delivery of *ZAMIL 14*, an Anchor Handling Tug/Supply (AHTS) vessel, while achieving a safety record of zero lost time incidents (LTI) on the project, saw them rewarded

by Saudi Arabian customer, Zamil Operations and Maintenance Co. (Zamil) with a US\$10,000 bonus.

The 60-tonne bollard pull AHTS was delivered to the satisfied owner on 25 August 2006. Adding to the feat, sister vessel, *ZAMIL 15*, was also delivered less than a month later on 20 September 2006. Each vessel clocked almost 300,000 manhours worked without LTI.

On a separate occasion, 100-tonne bollard pull Anchor Handling Tug (AHT), *Bourbon Rhode*, was delivered on 12 September 2006 after her naming ceremony. This is the sixth of OSVs, five of which are AHTS. Keppel Singmarine is constructing for Bourbon Offshore

Two harbour tugs, *KST Sedna* and *KST Sirius*, powered by a 4,500bhp engine, were delivered on schedule to Keppel Smit Towage (KST) in June and July 2006 respectively.

The launchings

The Ice-Class AHTS vessel for Lukoil –

1. Going full throttle, Keppel Singmarine is on track with its projects and achieving early deliveries such as *ZAMIL 14*

2. *Bourbon Rhode*

3. *KST Sedna*



Date	Milestone	Project	Owner
7 June	Delivery	H294 – 45T Tractor Tug	Keppel Smit Towage
12 June	Launching	H301 – 60m AHTS	Zamil Operations and Maintenance Co
4 July	Keel Laying	H324 – 100T AHT	Seaways International Pte Ltd
10 July	Launching	H299 – 100T AHT	Bourbon Offshore Surf
14 July	Delivery	H295 – 45T Tractor Tug	Keppel Smit Towage
15 July	Keel Laying	H311 – 130T AHTS	Gulfmark Offshore
20 July	Launching	H300 – 65m Ice-Class AHTS	LUKOIL – Kaliningradmorneft
15 Aug	Strike steel	H312 – 130T AHTS	Gulfmark Offshore
25 Aug	Delivery	H302 – 60T AHTS	Zamil Operations and Maintenance Co
12 Sep	Delivery	H298 – 100T AHT	Bourbon Offshore Surf
20 Sep	Delivery	H301 – 60m AHTS	Zamil Operations and Maintenance Co

Kaliningradmorneft (LUKOIL) was launched in July 2006. This is the first of two Ice-Class vessels Keppel Singmarine is building for the Russian oil company. The vessels will be deployed in the Caspian Sea region and are expected to be completed between end-2006 and mid-2007.

The company is also the first Asian yard to secure a turnkey contract to build two Ice-breaking vessels for Lukoil.

The seventh vessel for Bourbon Offshore was also launched in the same month.

The keel layings and strike steel

Gulfmark Offshore's first of six AHTS vessels had its keel laid in July 2006 while the second vessel struck steel recently in August 2006.

Customised to the owner's requirements, the 10,700 bhp vessels are being built to Keppel's Marine Technology Development's (MTD) proprietary design. Two of these vessels are also being built by sister yard, Keppel Nantong Shipyard.

These vessels will meet the growing demand of Gulfmark's customers in Southeast Asia. Keppel Singmarine has successfully delivered two AHTS vessels, *Coloso* and *Titan*, also of MTD design, to Gulfmark in 2005.

Another keel laid in the same month was for a 100-tonne AHT for Keppel Singmarine's new customer, Seaways International Pte Ltd.



Catching the conversion and newbuilding waves

Keppel O&M secured contracts worth a total of S\$210 million to carry out the conversion of two floating production storage and offloading (FPSO) facilities and the construction of five AHTS vessels.

Nelson Yeo, ED of Keppel Shipyard, a wholly-owned subsidiary of Keppel O&M, said, "Enquiries for FPSOs and OSVs remain active and we expect this to continue, particularly for FPSO and FSO facilities. We see a strengthening in demand for upgrading and conversion of such vessels."

"Keppel is poised to meet these demands by drawing on our strong track records, competent staff in project management and engineering, skilled workforce and integrated global network of yards to offer high value-added services and solutions to our customers."

The conversion contracts were clinched by Keppel Shipyard from regular customers, Monaco-based Single Buoy Moorings (SBM) and Frontline FPSO Ltd (Frontline), a new business unit of Frontline Ltd. of Bermuda.

Keppel Shipyard will convert for SBM the 310,000 dwt VLCC *Litiopa* into a FPSO, *FPSO Saxi*, which will have oil production capacity of 100,000 bopd and storage close to two million barrels of oil.

When completed in early-2008, the vessel will be leased to ExxonMobil for the Kizomba C Development, offshore Angola in West Africa.

This is Keppel Shipyard's ninth similar project for SBM since 2000. Its last project



Keppel Singmarine continues to build on its design and construction expertise to offer customers high value-added services and solutions

from same owner is the *FPSO Mondo* which was secured in June 2006 and will be leased to ExxonMobil. SBM is one of the world's largest operators of FPSOs and FSOs.

Keppel Shipyard will also carry out the conversion of a 112,000 dwt shuttle tanker, *Front Puffin*, into a FPSO facility for Frontline whose parent company commands the world's largest modern fleet of VLCCs, Suezmax tankers and Suezmax OBO carriers.

Upon delivery, *Front Puffin* will be able to produce up to 40,000 bopd and store up to 720,000 barrels of oil. It will be leased to AED Oil Ltd for the Puffin Field, Bonaparte Basin in North Western Australia.

Keppel Shipyard has a strong track record of more than 60 FPSO and FSO

conversion and upgrading projects. Currently, it has in hand six other FPSO and FSO projects.

Meanwhile, Keppel Singmarine has secured five 62m AHTS vessels from first time customer, Whitesea Shipping & Supply LLC (WSS).

The vessels will be constructed in Keppel Nantong Shipyard, bringing the total number of vessels being built by the Chinese yard to 13 units. Deliveries for these vessels are scheduled between 2008 and early-2009 for operation in the Middle East.

Based in the United Arab Emirates (UAE), WSS is a regular customer of Arab Heavy Industries (AHI), an associate of Keppel O&M, which services WSS's fleet of OSVs.

Spreading the bonus to the community

Keppel Verolme celebrated a safety bonus from a satisfied customer by donating it to a charitable cause.

The team clocked a zero lost time incident (LTI) record for the completion of the *Terra Nova FPSO*, and was awarded a bonus cheque of over EUR 30,000 by Petro-Canada for their achievement.

Committed to good corporate social responsibility, Keppel Verolme used the bonus to benefit the community of Rozenburg, the Netherlands.

On 21 September 2006, Harold Linssen, MD of Keppel Verolme presented a cheque to De Sutter-Besters, Mayor of Rozenburg in the heart of the city who received it on behalf of five local charities.

Harold shared, "We are delighted to receive the token from Petro-Canada and are honoured that we have been given the opportunity by Petro-Canda to select the charities of our choice."

The community contribution will go to a senior citizens society, a junior society, help to improve a playground for children, a teenagers' foundation, a scouting association and a music foundation.

Commending the yard for its accomplishment, Mayor De Sutter-Besters said, "Keppel Verolme yard has managed and executed this project in a tremendously efficient way and achieved the milestone of more than 380,000 safe working hours."

Harold added, "Safety is very important to us. This safety achievement highlights the significance of our efforts in ensuring safe practices in the yard for all our employees and subcontractors, which totals up to more than 1,000 workers in our yards each day."

Works onboard the vessel included maintenance, inspection and modification of the hull and process topsides systems. The installation of an additional living quarters (ALQ) aft of the existing accommodation increased the Persons On Board (POB) capacity of the vessel.

Maintenance works involved were the survey and overhaul of thrusters and underwater valve. In addition, Keppel Verolme

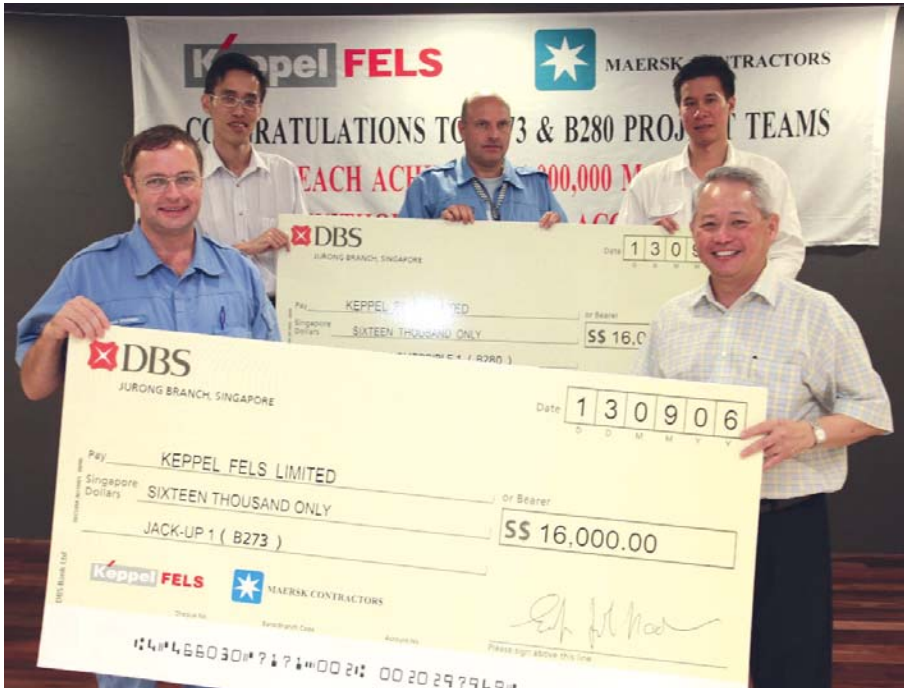
carried out vessel and process systems repair and hull coating. Inspection and modification works covered the testing of cargo tanks, pressure vessels and process modules.

Terra Nova FPSO's scheduled drydocking was successfully completed in two months, and has since been deployed back on the Terra Nova field, located 350km ESE of St John's Newfoundland, Canada, earlier than its expected date of deployment in October.



To Rozenburg, with love from Keppel Verolme – Volunteers of the charities with Donna O'Grady of Petro-Canada (holding the cheque, dressed in pink shirt), Mayor De Sutter-Besters (dressed in grey), Michiel Heuven, Project Manager of Keppel Verolme (dress in green shirt) with Harold Linssen on his right

Keeping in tune with safety ...



Multi-tiered safety checks by the yard and project teams ensure that work is carried out safely



Partners in safety, Keppel FELS Project Manager, Jay Singam and SeaDrill Project Manager, Paul MacCallum

Safety has always been the priority for Keppel O&M and this was reiterated in the month of September with four awards given out to various project teams for their safety achievements, not just in local yards but in overseas yards as well. It is a message that has been propagated across the group and cultivated among the employees.

Two for the record

Keppel FELS achieved a first on 13 September 2006, when projects Maersk Jackup 1 and Maersk Semisubmersible 1, both achieved one million manhours without lost time incident (LTI) each.

Said Erik Madsen, Site Manager for Maersk Contractors, "I certainly hope for these safety achievements to continue and look forward to the next milestone of two million manhours."

Sharing the same sentiments is Michael Chia, ED of Keppel FELS, "This is the first time for Keppel FELS to have achieved one million manhours without LTI for two projects at the same time and for the same owner.

"This is the result of the trust, confidence and good working relationship between the Maersk and the Keppel FELS project teams."

Keppel FELS is currently undertaking seven projects for Maersk, consisting of four jackup units and three semisubmersible units.

"We are definitely looking forward to more safety milestones for each project. With seven Maersk projects, we must achieve 21 million manhours and this is a long way to go because we have only achieved 10% with these first two millions," Michael added.

The two projects achieved their respective 500,000 manhours without LTI earlier this year in July.

West Atlas in safe hands

Another project, *West Atlas* achieved its first million manhours in early August 2006. Built for SeaDrill Management (SeaDrill), *West Atlas* was recently fleeted to the end of the drydock, signifying another step closer to its completion.

At the ceremony to commemorate the safety achievement, Jay Singam, Keppel FELS Project Manager of *West Atlas* thanked his team for ensuring that safety is applied in every stage and aspect of the project, and also the SeaDrill project team for being a partner in safety.

He said, "It is due to your vigilance on safety that we are here to receive the award today."

Enasco's safety milestone

The first ultra-deepwater semisubmersible rig for ENSCO International (ENSCO), *ENSCO 8500*, clocked yet another milestone in its construction in Keppel Batangas Shipyard. By end of September 2006, it had achieved two million manhours worked without lost time incidents (LTI).

"This achievement is made possible by the collective effort and safety consciousness of the project teams of ENSCO, Keppel FELS and the shipyard. We shall continue

to work closely with everyone involved in the offshore project in ensuring a safe work environment and an incident-free culture in the organization," stated Kok Boon Heng, President of Keppel Batangas Shipyard.

The *ENSCO 8500* is slated for delivery in 2008, and will commence its operation for a consortium of three independent oil companies for operation in the Gulf of Mexico. The oil rig is a dynamically positioned offshore drilling unit with a single conventional drilling derrick system.

Keppel Batangas is building two other semi rigs for ENSCO, the *ENSCO 8501* and *ENSCO 8502*, subcontracted by sister yard Keppel FELS.

...Staying in step with the message

Safety is no accident. It is the result of diligence, vigilance and education. That was the message Keppel Cebu Shipyard successfully imparted to the maritime students, shipping operators, marine surveyors and the general public during the annual National Maritime Week held from 24 to 30 September 2006 at the SM Cebu City Entertainment Plaza.

This was organised by the Maritime Industry Authority (MARINA) of the Philippines, aimed at promoting public awareness on maritime safety. The exhibition was graced by the Cebu City Vice Mayor, Mike Rama, Cebu City Councillor, Jack Jakosalem, and MARINA Regional Director, Atty Glen Cabañez.

Themed "Dynamic developments in all sectors of the maritime industry", the week-long event bustled with fun and interactive sports activities, with showcases by shipping operators, maritime training centres, maritime



Promoting safety together: (from left) Atty Glen Cabañez, MARINA Regional Director, Jack Jakosalem, Cebu City Councillor, Mike Rama, Cebu City Vice Mayor, Fok Swee Yin, President of Keppel Cebu, Jennifer Macairan, Corporate Affairs Manager of Keppel Cebu and Ritchie Almagro Senior QA Officer of Keppel Cebu

universities, shipyards and related government units such as the Philippine Ports Authority, the Cebu Ports Authority and the Philippine Coast Guard.

Keppel Cebu presented to an appreciative crowd, a video presentation on the proper use of personal protective equipment and elucidated the safety rules of different

trades as well as highlighted common work hazards.

As Cebu positions itself for the hosting of the ASEAN Summit in December 2006, the importance of safety highlighted during the maritime exhibition boosts confidence on the readiness of Cebu for this very important event.

Fighting the Flu



Keppel FELS employees being checked for Avian Flu at the Acacia Lodge



At the North Gate, Deputy Yard Manager T.T. Low (left) supervises the subcontract workers being examined by the Avian Flu testers

While the Avian Flu has not reached the shores of Singapore, Keppel O&M is not taking any chances. Its Business Continuity Management (BCM) Working Committee's Task Force for Avian Flu Preparedness has carried out a simulation exercise as part of its overall preparations in dealing with such a pandemic.

In the early hours at 5.30am on 29 September 2006, Keppel FELS' workers at Acacia Lodge were preparing to board their buses for work as usual when they were met with Avian Flu testers armed with thermometers, ready to counter the virus. Workers who cleared the temperature checks were allowed to board the buses at Acacia Lodge and enter into the yard upon arrival.

At 6.15am, the subcontractors' workers entering Keppel FELS Pioneer Yard's North gate found themselves under the scrutiny of the Avian Flu testers and their thermometers. They were systematically checked for temperatures above 38°C, as well as any symptoms of the Avian Flu.

Simultaneously, employees entering Pioneer Yard's Main gate were also subjected to the same check. The trained testers were meticulous yet expedient in their examination ensuring that no long queues formed outside the gates even as busloads of employees arrived.

Those found to have high temperature and other symptoms (such as dry cough) were immediately isolated in a designated area where a medic would attend to them. Contact tracing would be conducted to identify any other persons who may have come into contact with the infected person. All these were carried out with

minimal disruption to the daily inflow of thousands of workers.

The containment exercise was completed smoothly under the supervision of Richard Tay, Keppel FELS' yard manager and chairman of its Avian Flu working committee. He said, "This exercise together with other educational efforts will help our employees better understand the Avian Flu and what they are expected to do in a real situation.

"I think we are prepared should there be an Avian Flu outbreak. All the lessons learned will be shared with our overseas yards."

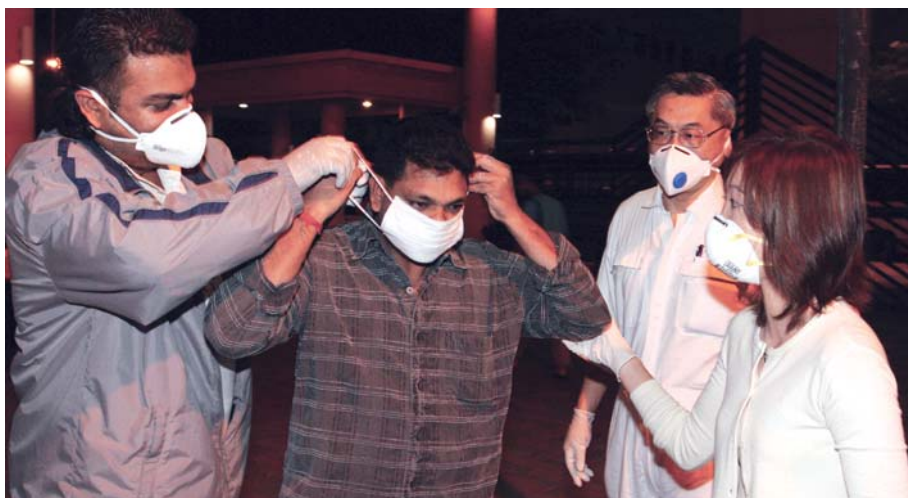
The simulation exercise aims to familiarise employees with the procedures that they will have to observe daily in an actual situation to prevent the spread of the virus. This containment procedure is to ensure that the thousands of workers residing at the company's dormitory, as well as all other staff and subcontractors' workers coming into the yards for work daily are free from Avian Flu symptoms.

Attyah Hassan, General Secretary of Keppel FELS Employees Union (KFEU), who observed the whole exercise said, "I think the exercise went well with every individual knowing what to do. Prevention is better than cure and this exercise has gone a long way to creating awareness among the Keppel employees of the danger of the Avian Flu. It is an excellent initiative by Keppel."

Steel worker Doddi Apparao, who was one of those tested at Acacia Lodge said, "The exercise helps us to feel safer. It is a good precaution and even in the morning briefings, they tell us about Avian Flu and how to protect ourselves."



[From right to left] Richard Tay, Joseph Wong (Business Continuity Plan coordinator) and Attyah Hassan, observing the Keppel FELS' employees undergoing the Avian Flu test



Doddi Apparao being tested and "quarantined" as a suspect case and undergoes contact tracing at Acacia Lodge



Despite being "quarantined" and attended to by the medic, Projects Secretary Nigar Bakhishova was impressed by the whole exercise

Increasing capacity at Arab Heavy



Keppel FELS, Keppel Shipyard, AHI and Fred Olsen Energy project team in discussion in front of the main riser column



The Perronegro rig towers in the background while the Car carrier, AJMAN CITY, is engaged in the bustle of the yard

Arab Heavy Industries (AHI) recently undertook the conversion of Van Oord ACZ's *HAM 602*, an offshore multi-purpose support vessel, into one of the largest stone-dumping vessels with a carrying capacity of 2500 tonnes.

The conversion which involved more than 580 tonnes of steel fabrication, complete removal of the original deck and installation of a new stone carrying deck, was a testament to the yard's capability.

The three separation walls and two dozer blades were fabricated and installed on the new stone deck. The hydraulic system was installed and fully commissioned.

Coincidentally her sister vessel *CETUS*, a self-propelled, stone-dumping vessel, from Boskalis Westminster was also refurbished at the same time. Both vessels underwent a full special survey with substantial steel renewals of almost 300 tonnes.

The newly-made over vessels were

successfully completed to the full satisfaction of the owners and are fully operational in their respective projects.

AHI is also working together with Keppel FELS, Keppel Shipyard and Keppel Verolme, in upgrading the semisubmersible, *Blackford Dolphin*, for Blackford Dolphin Pte Ltd.

For this project, AHI is constructing 16 sponson blister blocks, four main riser and auxiliary columns, totalling over 3,000 tonnes of steelwork to be shipped to Keppel Verolme for integration onto the main vessel.

The team achieved over 500,000 manhours with no lost time incidents (LTI).

With this safety milestone, AHI is also launching a HSE drive to maintain this record. It includes the implementation of a safety incentives scheme and a full scale safety refresher course.

AHI has an impressive track record of

fabrication achievements, utilising over 90,000 sq metres of fabrication area and a comprehensive steel fabrication shop. To further improve productivity, AHI is upgrading its facilities with the installation of two 25 tonne travelling cranes on the slipways.

Since Keppel O&M's participation in 1991, AHI's shiprepair facilities have grown from a modest four slipway operation to being able to dock vessels up to 30,000 dwt in her new graving dock.

The new 250-metre Al Zhora wharf with a 5,000-tonne load out facility is also suitable for alongside repairs of offshore jackup drilling rigs.

Augmenting its range of ship care services to its clients, AHI's wholly-owned subsidiary Arab Eagle Marine LLC was set up in Dubai to provide full afloat repair service to vessels in ports and the anchorages.

Industries



Lifting and installation of the separation wall for the *HAM 602*

Soaring with orders

Arab Eagle Marine Engineering (AEME) has also been very busy with the afloat repairs sector. The major project this year has been the steel renewals on the jackup rig *Foresight Driller V (FDV)* while on station in Iran. The work had to be carried out in coordination with the drilling team to ensure that the operation of the rig was not affected while at the same time maintaining strict safety control.

AEME also carried out a fast-track steel fabrication job for Saipem's Floating Production Storage and Offloading (FPSO) vessel, *CIDADE DE VITORIA*. The work involved the fabrication of the two large hose reel foundations of 35 tonnes and other steel structures such as winch foundations and emergency load out platforms, totalling about 100 tonnes.

Quality investment

Keppel O&M's philosophy is to invest selectively in capacity to handle a high level of jobs amid the current boom. This is reflected in the approach it took in investing in Bintan and converting its shipyards in the Philippines to undertake offshore fabrication work.

This was reiterated by CB Choo during a recent meeting with a group of investors from the United Kingdom.

Managing capacity constraints, according to CB Choo, is not the only issue that rig building yards like Keppel has to deal with. There are other factors in the supply chain that one has to manage, such as the critical components in the rig's jacking and leg systems and the supply of quality steel. These factors however, are to Keppel's advantage as it possesses its own proprietary designs.

These were just some of the takeaways by the investors during the hour long meeting with Keppel O&M's senior management. CFO Sit Peng Sang and Keppel FELS' ED Michael Chia co-hosted the meeting alongside CB Choo.

The passion, knowledge and experience of Keppel's management left a deep impression, as one fund manager noted.

"Two of the key criteria for our investments are management and franchise quality. Choo gave us an excellent overview of the Offshore & Marine division, reinforcing our long held belief that Keppel boasts of a strong, enthusiastic and well-incentivised management," said Alistair Thompson, Deputy Head of Asia-Pacific Equities at First State Investments (Singapore).

The group of 18 visitors was subsequently brought on a tour of the yard, many of whom witnessed for the first time the various rig building jobs at their different phases of construction.



Michael Chia (right), ED of Keppel FELS explaining the business to a fund manager

Keppel launches Kazakhstan's first barge

Keppel Kazakhstan has launched transportation barge *AKKU1*, built for Agip Kazakhstan North Caspian Operating Company N.V. (Agip KCO).

The launch marks a significant milestone as *AKKU1* is the first offshore vessel ever built in Kazakhstan.

His Excellency Nursultan A Nazarbayev, President of the Republic of Kazakhstan, graced the launching ceremony as the Guest-of-Honour.

He said, "Three years ago, I visited Keppel Kazakhstan to lay its first stone (for the waterfront). Today, we are going to widen this area for the construction of platforms and rigs. Congratulations on the successful completion of your first project.

Keppel is one of the biggest shipbuilding companies in the world. We are thankful to Keppel for investing in Kazakhstan."

AKKU1 is one of four barges that Keppel Kazakhstan is constructing for Agip KCO. It is 92 m long, 30 m wide, and 6 m deep, equipped with auto ballasting system to facilitate skid-on/skid-off operations. Delivery of this barge is expected within this year. Thereafter, the remaining parts of the contract which include the other barges, the pipe racks

and other structures will be delivered progressively.

The project was awarded to Keppel Kazakhstan in 2005 to support the development of the Kashagan oil field, which is one of the largest fields discovered over the last 30 years.

The oil and gas sector is the engine that drives the Kazakh economy and the Kashagan project is expected to make positive contributions in the areas of employment, training and growth of the local industry in the realisation of the project's development.

Yick Ping Wong, President of Keppel Kazakhstan, said, "Keppel Kazakhstan is proud to be a part of this new and exciting development at Kashagan. It is committed to develop a modern facility that will benefit the local Kazakh economy.

"The launch of *AKKU1*, is also a celebration of an achievement by our local people, who have worked hard hand-in-hand with their Singaporean counterparts towards the completion of this flagship project.

"We are committed to see the transfer of know-how and skill sets from our Singapore talents to our Kazakh workforce to build up a pool of qualified

1. Yick Ping Wong (right), with H.E. Nursultan Nazarbayev, President of the Republic of Kazakhstan as H.E. cuts the ribbon to launch *AKKU1*
2. *AKKU1*, which means Swan in Kazakh, is the first offshore vessel ever built in Kazakhstan
3. Yick Ping Wong describes *AKKU1* to H.E. Nursultan Nazarbayev
4. Some 300 Keppel Kazakhstan's local workforce witnessed the launch of *AKKU1*



tradesmen here. To complement this effort of growing the local community and creating maximum local employment, we are starting an Apprentice school with the help of the local authorities and Polytechnic College. This will benefit not only future projects undertaken by Keppel Kazakhstan, but also the industry as a whole."

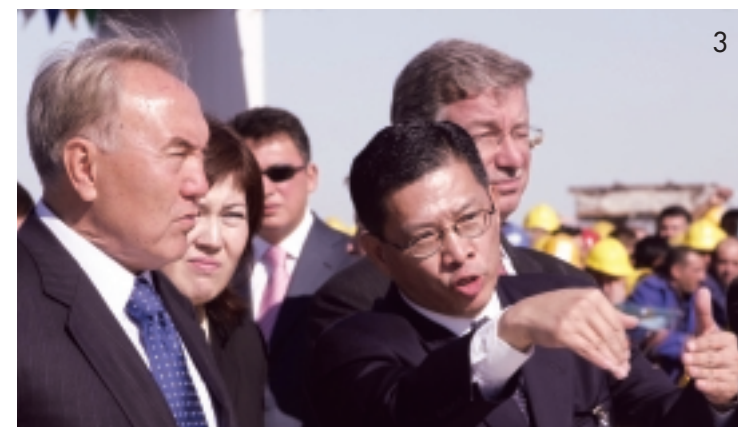
Keppel Kazakhstan is located in the

seaport city of Aktau on the north-eastern part of the Caspian Sea, set up in April 2003 to participate in and contribute to the emerging offshore oil and gas industry in the Kazakh Sector of the Caspian Sea. Keppel Kazakhstan complements its sister yard, Caspian Shipyard Company (CSC) in strengthening Keppel O&M's presence in the Caspian Sea region.

The yard's principal activities include the

construction, conversion and repair of offshore drilling units and structures, specialised vessels such as tugs and supply boats.

Agip KCO is involved in hydrocarbon exploration in the North Caspian Sea off the coast of the Republic of Kazakhstan. Partners in Agip KCO include Agip, ExxonMobil, TotalFinaElf, Philip Petroleum, Shell, Inpex and Kazmunaygaz.



Living innovation



iQC Secretariat Chairman and Shipyard Manager, Richard Tay, with CH Tong (right) viewing the various iQC team executive summaries



The team from HR presenting in school uniforms

The slogan behind Keppel FELS' Innovation and Quality Circles (iQC) – “To Adopt, Adapt and Advance Innovative Solutions and Ideas into Practice” – came alive in July 2003 as Keppelites juiced their brains for innovations to enhance work efficiency.

Moving into the conclusion of the third movement since its inception in 2003, this year's Innovation Month was opened on 15 August 2006. It continues to provide a platform for employees to showcase their inventive energies through iQC projects.

Speaking at the launch, CH Tong said, “We need to have people like you who can collect ideas, pick the right ones and rapidly put them into action that will generate value and help the company to cut down cost while maintaining quality.”

This year, after several months of researching and testing out their projects, 26 iQC teams formed by 175 iQC activists from various departments presented their projects over a period of two weeks to a specially selected panel of judges.

Of the seven assessors, there were two external assessors from Keppel Shipyard for the first time. It provided a good opportunity for learning and sharing among Keppel O&M's yards.

Dawn Tan, Senior HR Officer from Keppel Shipyard (Gul), said of her stint as an external assessor, “Their presenters are seasoned and confident during both the project presentations and the question-and-answer session. This convention has given me greater exposure and allowed me to bring valuable lessons, on what to look out for when assessing a project as well as the accuracy of the report, back to my yard.”

The ideas presented ranged from revamping the customer feedback surveys and designing reusable lifting padeyes to the improvements

in purchasing and subcontract processes.

With the “Most Innovative Presentation Award” up for grabs, many teams went beyond mere slide shows to provide information in an entertaining manner through role-plays and proto-type demonstrations.

The team “Solutions” from HR, whose project sought to improve the effectiveness of the HR induction programme, bagged the award with their unique presentation of re-enacting a dramatic scenario from school which transported the audience back to their teenage years.

The judges scored the projects on a total of 1000 points in categories such as the achievements, sustainability, organisational impact as well as benefits of the project.

Awards were given out to the outstanding iQC team and outstanding iQC individual. Nobody went home empty-handed as there were Star, Gold, Silver and Bronze awards as well as a Certificate of Participation given out at the closing ceremony on 18 September 2006.

Besides the iQC Awards, prizes were also given out to employees who contributed valuable ideas to reduce wastage and enhance organisational efficiency through the staff suggestion scheme.

Innovation Month 2006 ended on a high note as Chee Jin Kiong, ED of Keppel O&M HR, congratulated the teams involved, saying, “To be able to contribute at a time when our yard’s workload is extremely high is already an achievement in itself. I hope these awards do not spell the end of your innovation and quality journey but will spur you on to attain even greater heights.”



Outstanding iQC Team of the Year (2006) and Star Award Winner, GBB from Production Hull presents their winning project

Outstanding iQC Award Winners

Star Award Winner

The team from Production Hull, GBB, improved the time taken for cantilever main beam fabrication by totally eliminating overhead welding. After implementation, the project generated additional revenue of \$504,000 annually and also achieved a 40% reduction in man-hours.

Speaking about his team’s winning project, Team Leader, K.H. Chan said, “By improving the current cantilever main beam fabrication and assembly in the Steel Shop, we not only managed to save cost, but also optimised the space usage. In terms of time, safety and labour, we managed to achieve great improvement as well. It is always satisfying to see our innovation given recognition by the management.”

One of the Outstanding iQC Individual Winners

Participating in iQC for the first time,

Team CSSI’s project of “Improving Customer Satisfaction Survey (CSS) as a tool for measuring customer satisfaction” saw the team achieving a silver award and Wong Xin Yi receiving the outstanding iQC individual award.

She said of her win, “This project involves mainly intangible benefits that may not be apparent to others, and therefore I am elated and appreciative that our efforts have been recognised.

“We revamped the survey with more perception based questions. The perception-based questions allow us to obtain important information on how owners perceive our yard, which is critical to their true satisfaction of the work done by the yard.

“As most of the team members were new and busy with their projects, it was indeed a challenge to accomplish what we did successfully. I would like to thank my assistant team leader, Fernanda, as well as my team members for their cooperation in getting the whole project done on time.”

A family affair

Some 14,000 pairs of feet kicked up a sandstorm on Sentosa's Siloso Beach on 2 September 2006, as employees and families of Keppel O&M hit the beach for the annual Family Day.

This year, Keppel O&M shared its family fun with children from Keppel's adopted charity, Association for Persons with Special Needs (APSN). They have long become a part of the larger Keppel family as Keppelites continue to extend their reach to the less endowed.

As families and friends from Keppel FELS, Keppel Shipyard and Keppel Singmarine came together, they celebrated their best of times as the group recorded an all-time high business performance and a harmonious working relationship among its workforce.

Addressing the huge assembly of people, CB Choo said, "We recognise the excellent support of our families and our spouses and I would like to thank them for their support and understanding when work takes away the time you spend with them.

"I would also like to thank the Unions for their strong support and for playing a vital

role in ensuring the employees and company work well together."

Such harmonious working relationship is evident in the successful organisation of the family day. Guest-of-Honour, Mr Heng Chee How, Minister-of-State for Health and Deputy Secretary-General for the National Trades Union Congress, congratulated the organising committee and sub-committees for a job well done.

"The good turnout today exemplifies the successful ties between the Management, the Unions and the Keppelite Recreation Club in creating a well-trained, healthy and cohesive workforce. More importantly, it demonstrates the importance you place on family and community ties," Mr Heng complimented.

The 14,000-strong 'family' sprawled on the beach, enjoying a myriad of activities, including beach soccer, volleyball, lines of game stalls, and a host of attractive lucky draw prizes, drawing participation from huge, enthusiastic crowds.

The usual hot favourites on the sweaty Saturday afternoon were the pulsating

gigs put up by a group of Keppelites who mesmerised their colleagues with their jives and jiggles on stage.

As the buzz of activities simmered down with the setting sun, families and friends huddled together on the beach for some quiet moments. Although exhausted from the day's activities, all were glad to have spent the afternoon with their loved ones.





1. Receiving Minister Heng (centre) were CB Choo (left) and CH Tong (right), MD/COO, Keppel O&M
2. We 'Can Do' it!
3. The children too were not left out of the fun
4. Under one roof are 14,000 Keppelites together with Senior Management and Union representatives (front row)
5. Keppelites embracing new challenges
6. Mastan celebrates his birthday with the VIPs and his family



Presidential birthday

Mahmad Bin Mastan, the out-going President of Keppel Employees Union (KEU), had a pleasant birthday surprise at the Keppel O&M Family Day.

Like all caring family members, the Management and Union planned a celebration for him when they discovered that his 60th birthday coincided with the company's Family Day.

Mastan has been with Keppel for the past 30 years and served as President of KEU for the last three years.

The avid bodybuilder and golf enthusiast will be re-engaged as *Serang* (malay term for Assistant Supervisor) with the Plant and Maintenance Section in Keppel Shipyard Tuas.

When asked what made him take up the offer of re-employment, Mastan proudly declared, "I am still active and feel very energetic. Instead of retiring, I prefer to continue what I have been doing, working as well as spending time with my family."

The Management of Keppel O&M had earlier organised a lunch and a get-together session in Mastan's honour to thank him for his contribution and dedication in maintaining a cohesive workforce among Keppel's employees during his term as President of KEU.

Reel life at Keppel

There is a hero in every story. So we have a passionate protagonist in the exciting new drama by MediaCorp being filmed in our Keppel yards, both here in Singapore and Brazil.

Against the challenging backdrop of the offshore and marine industry, our hero finds big action, high drama and of course, love.

To be named *The Peak* (最高点), the drama serial threads the private worlds of its five leading characters, delicately interlocked through their shared experiences in the same industry. As they seek happiness in their lives, they find joy and satisfaction in setting aside their own interests for people, for passion and for profession.

And there is mystery as well... Indeed, much secrecy guards the script and who plays who in the story as the camera continues to roll in the yards.

Filmed primarily in Keppel FELS in Singapore, the span of this MediaCorp drama serial reaches to the picturesque Keppel FELS Brasil's yards in Angra dos Reis and Rio de Janeiro. It also features an international cast from the two Americas, Middle East, Europe, and of course, Asia.

MediaCorp's rising stars Dawn Yeoh and Elvin Ng are cast alongside leading actors Christopher Lee, Qi Yu Wu, Jeanette Aw and veterans, Huang Wen Yong and Lin Mei Jiao.

Soap opera aside, the uninitiated to the industry will gain good insights into the depth and scope of the offshore, marine and maritime industry and what makes Singapore the world's leader.

Michael Chia, ED of Keppel FELS, said, "In recent years, we have done a lot in co-operation with the government to promote the offshore, marine and maritime industry. This TV drama serial is yet another step in the same direction.

"The serial would allow us to appeal to a wider target audience, giving them greater understanding of the technological leadership and global fame that our industry has achieved.

"Ultimately, we want to show young Singaporeans that there are challenging and rewarding careers in this industry."

The drama serial is by far the largest and most challenging production for MediaCorp in 2006. It is written by their golden scriptwriter, Ang Eng Tee, who also wrote the hit drama serials "Holland V" and "A New Life". The serial



Talking the talk and walking the walk. MediaCorp artistes went on an orientation of the yard to familiarise themselves with the various locations as well as experience the working environment



Safety is key in "The Peak" as Lydia Soh (left) leads the briefing for the cast and crew



Christopher Lee (extreme left) was star struck by the mammoth P-52 floating production unit

is directed by Chong Liung Man, Lai Liting and Lin Meina, with the dynamic Chia Men Yiang as Executive Producer.

Star on safety

Whether real or reel life, safety in the yard is paramount, even for stars.

It was a great treat for fans to catch glimpses of the popular MediaCorp Studios' artistes looking like regular Keppelites, dressed in boiler suits and helmets.

Like all Keppel O&M personnel, it was mandatory for the stars, as well as the rest of the cast and crew, to go through an orientation of the yard and be familiarised with its safety regulations.

The safety induction programme for the MediaCorp crew was led by Lydia Soh, Assistant HSE Officer, Keppel FELS, and supported by Sam Nguai of Keppel Shipyard.

The comprehensive session briefed the stars and crew on safety dos and don'ts. These included familiarising the cast and

crew on proper safety wear and identification of safety hazards.

Starlet Jeanette Aw commented, "The Keppel team has been taking very good care of us during filming and they ensure that we work under the safest conditions. They have strongly impressed upon us that we should not take our safety for granted!"

Brazen in Brazil

If they were awed by mega structures at Keppel FELS, the MediaCorp crew and cast were completely overwhelmed by the mammoth P-52 production platform. Finally, the giant that they have read in the script loomed before them.

Over three days at the BrasFELS yard in Angra dos Reis, it was action, action and more action as the camera rolled from 6am to 6pm daily.

Some of the major and most dramatic scenes were shot in Brazil such as a major lifting operation of an accommodation block which took three hours to capture and others out at sea which required filming from a helicopter overhead.

Our Keppelites even lent their acting talents as some of them were given cameo roles such as Keppel FELS Brasil's Legal & HR Manager, Richard Robspierre, who was a 'CEO' of the company; BraFELS' Section Manager for Painting, Scaffolding & Marine Transport, Nilton Sergio S Cardoso and BrasFELS' Safety Manager, Milton Areas, who played key project personnel for P-52. Watch out for our very own stars in the making.

Despite all the adrenaline rush and high-powered action in back to back scenes, safety continued to be emphasised from day one, even as cast and crew had to go through the whole safety drill again. But becoming almost Keppelites, they are by now well rehearsed, with the value of safety ingrained in them.

Although it was not almost sunny Brazil that they experienced, the warm friendship and passion of our Keppelites and the scenic landscape left deep impressions on the MediaCorp stars and production crew.

More to come on our star-studded drama serial in coming issues.

Plucking the fruits of knowledge



Future maritime leaders with CB Choo (middle) are (from left) Lin Shao Wei, Zhang Qian, Teh Roowei and Your Teck Wei

An ancient Greek philosopher, Aristotle, said that the tree of knowledge is bitter but the fruits are sweet.

Professor Dracos Vassalos, Head of Department of Naval Architecture and Marine Engineering (NA-ME) from the Universities of Glasgow and Strathclyde (UGS), shared this as he congratulated 14 pioneer students who had graduated from the UGS's fourth year Bachelor of Engineering (BEng) course in Singapore.

CB Choo, who is also Member of the Board of the Singapore Maritime Foundation, witnessed the proud moment on 22 August 2006.

He shared, "I am very glad that you have chosen the maritime industry for your career. With the experience and knowledge gained from the course, I am confident you can play a significant role in this very important industry.

"It is also my hope that you will be the future leaders, whose achievements will encourage more young people to take up the maritime challenge."

Seven Singaporean students attained First Class Honours and of these top performing students, five were conferred the BEng prizes. What is more heartening is that four of these graduates are Keppelites. They are Teh Roowei of Keppel FELS, Your Teck Wei of Keppel Shipyard (Benoi), and Lin Shao Wei and Zhang Qian of Keppel Singmarine.

Roowei, who is sponsored by Keppel FELS, is a proud recipient of one of the BEng prize, the Salilaksha Basu Memorial award. She is also top scorer of the subject, Sub Sea Engineering, and received an accolade by her lecturer, Professor Colin MacFarlane.

OffshoreMarine caught up with the graduates who shared their proud moments.

Teh Roowei
Keppel FELS



I am excited and surprised to have received two awards, but this achievement is not mine alone. I have many course mates to thank, with whom I've developed a strong camaraderie. My parents have also been one of my greatest support, encouraging me to do my best in everything.

I have Keppel to thank as well, especially for the golden opportunity to further my studies. I would like to express my appreciation to my superiors for their constant encouragement.

The company has shown that they are very committed in ensuring its employees are well trained. As an individual, you must cherish this opportunity and prove that you can accomplish it. Now that I am back at work, I am eager to put what I have learnt into practice.

Your Teck Wei
Keppel Shipyard (Benoi)



Just after my National Service, I started working with Keppel. After five and a half years at the yard, I felt that it was time to pursue what I had always wanted to do – further my studies.

It was not easy of course, having been away from academia for a long time. I had to put in extra effort and additional hours of study. I am grateful to have had the help and encouragement from my study group and my wife.

My superiors, Abu Bakar (GM, Operations), TH Tan (Yard Manager, Operations) and Salleh (Section Manager), have also been very supportive. Prior to my studies, I was Assistant Manager of the piping section. To release me for studies, they had to find someone to take over my job, which was disruptive to work operations yet they did so without a second thought and I am really thankful to them.

Lin Shao Wei
Keppel Singmarine



There is a Chinese saying, 'A rising tide carries all ships'. Figuratively, the rising tide represents Keppel's strong growth and we symbolise the small ships carried by it.

We are most fortunate to be chosen by Keppel to join this inaugural course in Singapore. Prior to this, I had started on a part-time MBA course on my own, so having to juggle between the two was testing. It was tough, but I managed to pull through with perseverance, prioritising, time management and support from my bosses.

I am most grateful to Keppel for this invaluable opportunity to pursue my studies. I am also thankful for the guidance from my bosses at Keppel Singmarine – Charles Foo (MD), Hoe Eng Hock (ED), Goh Boon Kiat (Director) and Lee Tai Kwee (President, Keppel Nantong Shipyard).

Keppel is a great place to be in and I am very proud to be part of this great global company.

Zhang Qian
Keppel Singmarine



Receiving the certificate was an uplifting moment for me. It was like accepting an award for my years of hard work. Although my parents were in China and

could not attend the ceremony, they shared my glorious moment through the photos I sent home.

Unlike some of my fellow classmates, I did my course part-time. It was demanding and trying at times. Many of my weekends were spent studying and finishing my coursework. Sometimes I had to sacrifice my lunch hours to complete assignments.

Many would think that it is tough, with many sacrifices, but I choose to see it as maximising my time. Since the decision was made to further my studies, I had to do my best to get the best results.

Looking back, it certainly was not an easy road. But I believe that having a positive mindset is a must. Believe that you can do it, and you will.

Keppel now fully owns O&M Norway

Hailing from Norway, Offshore & Marine ASA (O&M ASA) became a wholly-owned subsidiary company of Keppel Offshore & Marine Ltd on 12 September 2006, and has been renamed Keppel Norway AS.

A company that engages in offshore and marine-related product engineering, maintenance and fabrication services, Keppel Norway AS is presently undertaking several important projects for sister companies in the Keppel O&M group.

The company is supplying AC power drive systems for a series of offshore jackup drilling rigs being constructed by Keppel FELS and the main propulsion electrical power packages for two ice-breaking vessels under construction at Keppel Singmarine.

Inge Oliveresen is the President of Keppel Norway AS, and is ably supported by his management team comprising Hans Peter Hegebo, Ole Osmundsen, Asborn, Mortensen, Andes Jaeger and Gunnar Larsen.

Keppel Norway AS is a leading supplier of power & automation systems, drilling and production systems and integrated projects and compact yard services.

The new standard-setting AC Wireline Unit™ ready to ship out



Leading the line with new technology standards

Keppel Norway AS' proprietary technology in the AC Wireline Unit™ has set a new industry standard. The company was nominated for the ONS 2006 Innovation Awards under the "New standard for wirelining" category.

The AC Wireline Unit™ is set to become the new standard bearer in the wireline industry by fulfilling all relevant rules and regulations, optimising ergonomics and efficiency, and changing working procedures for operators.

Wireline operations involves the use of a small-diameter metal line to carry tools and logging devices down into the bore hole to deliver vital information to well operators, geologists and engineers, and, at times, to perform a variety of well stimulation processes such as perforating.

Keppel Norway AS' AC technology eliminates the need for diesel engines, hydraulic power packs, hydraulic hoses, hydraulic valves, pollution and oil leakages. The wireline unit is calm and stress free, providing improved working conditions for operators to concentrate on the wireline operation.

Human mistakes caused by stress, and ailments caused by poor ergonomics will no longer be a factor in Keppel Norway AS' AC Wireline Units™.

The ONS 2006 Innovation Awards are intended to stimulate technology innovation in the petroleum and related energy sectors.

People Movement

As part of Keppel's job rotation and professional development programmes, several appointment holders have moved across various strategic business units within the Keppel O&M group. We also welcome new Keppelites into the big family.



Chandru Sirumal

Chandru joined Keppel FELS on 1 September 2006 as the General Manager for Quality Assurance and Management (QA).

Moving over from the Maritime and Port Authority of Singapore (MPA) where he was Assistant Director (Registry & Manning Department), he brings with him extensive experience in the shipping industry.

Chandru holds a Master of Science in Maritime Affairs (Shipping Management) from the World Maritime University.



Yong Chee Min

Chee Min is the new General Manager for Health, Safety and Environment (HSE) in Keppel O&M. He will lead and spearhead HSE

initiatives and programmes for the group.

Chee Min was previously seconded to Keppel FELS Brasil as its Deputy President, where his contributions included enhancing work processes and introducing new systems for work improvement.



Daniel Chang

Daniel will move to Keppel FELS Brasil on a two-year secondment programme, replacing Chee Min as the Deputy

President of the business unit in Brazil.

Daniel joined Keppel FELS in 1973 as a trainee apprentice and worked his way up through positions in Keppel Singmarine, Keppel O&M and recently in Keppel Shipyard as the Senior GM (Operations) of Tuas yard.



Abu Bakar

With more than 15 years of valuable experience in the marine industry, Bakar has been appointed

General Manager (Operations) of Tuas Yard from his previous designation as General Manager (Operations) of Benoi Yard.

Bakar is also a council member of the Association of Singapore Marine Industries (ASMI) Council.



Mok Kim Whang

Mok joined Keppel Shipyard on 28 August 2006 as General Manager (Operations) for its Benoi Yard with more than 30 years'

experience in the marine industry.

He was a sea-going engineer before joining Keppel Shipyard in 1976 as a Shiprepair Manager. He left Keppel Shipyard in 1988 and held appointments at general management level with various other local yards before rejoining Keppel O&M.

Stanley Yong

With effect from 1 September 2006, Stanley, who was the HR Manager of Keppel FELS, has been appointed as HR Manager of Keppel Shipyard where he is assisting in Compensation and Benefits matters. In addition, he will also help oversee Alpine's HR

David Low

David was previously the HR Manager of Keppel Shipyard, overseeing Keppel O&M's Training Centre and Alpine Engineering Services' HR function. David also assisted with Compensation and Benefits matters and the Human Resources Information System in Keppel Shipyard.

He has been appointed as Keppel FELS HR Manager with effect from 1 September 2006, and also continues his appointment as Keppel O&M Training Manager.

Partners in delivering quality work ...

Business around Keppel FELS yard did not stop the company from continuing the practice of meeting subcontractors regularly for serious talks and sing-along sessions.

Initiated by CH Tong, the recent dialogue session with its subcontractors was aimed at gathering feedback and brainstorming for new ideas to improve work processes and to manage resources better.

CH Tong said, "At Keppel, we do not see you as our subcontractors but partners in the business and extension of our limbs. We have to continue the good relationship that we have and work harder together to meet the current market demands."

Many of the subcontractors have been with Keppel FELS since it was a fledgling rigbuilder over 30 years ago. These lasting

relationships that Keppel FELS have forged with its subcontractors are key to the successful on time and on budget deliveries that the yard has been able to achieve over the years.

Tay Huat Heng, Director of Tellus Marine Engineering remembers fondly the past 35 years working with Keppel. He started out as a subcontractor apprentice, and is today a boss of his own company. He attributed the long-standing partnership to the fair treatment of subcontractors at all Keppel yards.

Eric Dai, Manager, Siong Leng Engineering whose company has been working with Keppel FELS for the past 20 years shared the same sentiments, "The project managers are very approachable and management treats subcontractors fairly."



Keppel FELS Management in serious dialogue with sub-contractors to meet rising challenges together

David Tan, Director, Sin Hong Thai Engineering, noted, "The dialogue sessions are beneficial for the interaction between management and subcontractors in seeking solutions to new challenges in today's competitive market."

After the dialogue session, everyone let their hair down and had a swinging good time at the karaoke lounge singing their lungs out.



Some lighter moments



The session was well-received and there were many ideas and solutions contributed

...and promoting safety



Front row (from left) Takeshru Itoh President of Itoh Construction Co., Dr Yip Hee Yan, President, Regency Steel Japan and Tetsuo Sakai, President, Shin-Nihoh Nondestructive Inspection Co. Back Row: Staff of RSJ

Keppel's commitment to safety throughout its business units and subsidiaries is shared by its like-minded partners, be it customers or subcontractors.

This was demonstrated recently at Regency Steel Japan, when three key subcontractors achieved 200,000 accident-free hours and each was presented with a certificate at a safety commemoration ceremony.

Regency Steel Japan is a JV between FELS Offshore Pte Ltd, a wholly-owned subsidiary of Keppel O&M, and Mitsui Bussan Steel Trade Company. The company is a manufacturer of large, high-quality steel structures for the international and domestic market.

Super vision of the Industry

Seeing is believing. Some 90 participants of the employability workshop saw for themselves the careers available as well as the conducive working conditions and challenges of working in a shipyard. Keppel O&M hosted them in a tour and dialogue session as part of the *Super V* programme,

The programme, is an initiative by ASMI, in collaboration with the Workforce Development Agency of Singapore and National Trades Union Congress, with the aim of identifying and training Singaporean supervisors to fuel the growth of the marine industry.

"Educating potential employees on the expectations of the industry is important as it prepares them mentally for future challenges and dispels any misconceptions that they might have. Through mutual understanding of both the potential employee's and the shipyard's objective, they can both enjoy a fruitful relationship," said Simon Soh, HR Manager of Keppel Shipyard (Benoi).

Selected candidates will embark on a two-year training programme in Keppel yards and upon graduation, assume supervisory roles in the various trades such as marine mechanics, steel fitting and pipe fitting. The candidates should be physically fit

and have at least secondary school education from all age groups.

Keppel O&M has been actively involved in the *Super V* programme recruitment drive since its launch on 24 November 2005.



All hands on deck for a better grasp of the industry

Springboard for LatinAsia partnerships



Bridging partnerships at the Networking Cocktail hosted by Keppel Group, CB Choo (second from left) is seen here with H.E. Paduka Hj Yusof Pj Kula from the High Commission of Brunei Darussalam (left) and Dr Balaji Sadasivan, Sr Minister-of-State for Foreign Affairs (fourth from left)

Keppel Group hosted some 200 foreign delegates, guests, partners and friends at the LatinAsia Biz 2006 Networking Cocktail at The Four Seasons Hotel on 13 September 2006.

Dr Balaji Sadasivan, Minister-of-State for Foreign Affairs, Ambassadors and high-

level representatives from the Latin American and Asian embassies also graced the occasion.

CB Choo, who is also Singapore's Non-Resident Ambassador to Brazil, said at the cocktail reception, "Companies from Latin America and Asia can forge strong partnerships to tap into the vast business

and market opportunities that are available, such as in the infrastructure, marine and logistics and education sectors."

Keppel Group has a presence in over 30 countries across the world, especially in Latin America and Asia, with shipyards, wastewater treatment and power plants in countries such as Argentina, Brazil, China, Ecuador, Nicaragua, the Philippines and Singapore.

The Networking Cocktail was held in conjunction with the LatinAsia Biz Forum 2006 by International Enterprise Singapore. The Forum aims to provide a common platform for businessmen from both continents to do businesses and form new partnerships, whilst identifying mutual areas for collaboration.

In its third run this year, the Forum coincided with the Annual Meetings of the Boards of Governors of the International Monetary Fund (IMF) and World Bank Group, which saw the gathering of global financial representatives in the world coming together to discuss the course of global economic development and formulate underpinning policy strategies.



A great opportunity to catch up with old friends and meet new ones

A good fellow



CH Tong was recently elected a Fellow of the Royal Institution of Naval Architects (RINA) for his professional responsibilities and contributions in the fields of naval architecture and maritime engineering.

RINA is an internationally renowned professional institution whose motto is to “advance the art and science of Naval Architecture”.

CH Tong is also a member of the American Bureau of Shipping, Nippon Kaiji Kyokai (Class NK) Singapore Committee, The Society of Naval Architects and the Marine Engineers (USA), Singapore Institute of Directors and a Fellow of the Society of Project Managers.

CH Tong (left) receiving his RINA membership (FELLOW) certificate from Dr Ir. Arun Kr. Dev, CEng, CMarTech Eurling, Fellow of RINA Council and Vice-Chairman of the Joint Branch of the RINA & the IMarEST (Singapore)

Running for man's best friend

How much is that doggie in the window? Priceless, especially for those whose pets are their best friends.

In support of the Society of the Prevention of Cruelty towards Animals (SPCA), Keppel O&M sponsored tee-shirts for a 4.8 km SPCA fun run held on 20 August 2006. Popular they were indeed as the tee-shirts were snapped up before they can even say go!

The Keppelite Recreation Club (KRC) was also delighted to involve Keppelites in the fundraiser event. Many Keppelites took to the trail at MacRitchie Reservoir with their waggly friends.

Ainon Haji Mohd Taib of the KRC organising committee said, “The participants were a mixture of adults, school children and pets including some beautiful Golden Retrievers and German Shepherds Dogs! They were adorable, loving and very well groomed!”



A pat for Keppelites as they complete the run, some with their best friends

Of her run, she added, “I did not take part in the competitive races but still I managed to make it all the way to the end, even if I had to walk!”

Participating in the competitive category, Han Bo Oo and Zaw Khun from Keppel Singmarine ran their hearts, or should we

say, tails out and came in 9th and 14th respectively. The event saw more than \$8,000 worth of items being sponsored for prizes and lucky draws. There were over 500 registered participants, raising over \$18,000 for SPCA.

A memorable day indeed to pause for paws.

Around our yards

OffshoreMarine tracks works at various Keppel yards.

VERMILION EXPRESS



CRYSTAL OCEAN



Singapore

Keppel Shipyard Tuas

Name : **VERMILION EXPRESS**
 Client : Solar Japan Co Ltd
 Country : Japan
 Type : Chemical Tanker
 DWT : 84,999
 GRT : 56,245
 Date : 16 – 25 August 2006
 Scope : General repairs

Name : **SMIT SAKHALIN**
 Client : Smit Fleet Services BV
 Country : The Netherlands
 Type : FPSO (TUG)
 DWT : 1,861
 GRT : 3,227
 Date : 21 July – 6 September 2006
 Scope : Conversion (Upgrading and retrofitting)

Name : **CRYSTAL OCEAN**
 Client : Anzon Australia Limited
 (Anzon Energy Limited)
 Country : Australia

Type : FPSO
 DWT : 6,900
 GRT : 8,700
 Date : 22 June 2006 – Present
 Scope : Upgrading and retrofitting

Keppel Shipyard Benoi

Name : **CAP SALINAS**
 Owner : NRG Norddeutsche
 Reederei
 Country : Germany
 Type : Container
 Year Built: 2001
 DWT : 33,900
 GRT : 25,713
 Date : 26 September – 6 October
 2006
 Scope : General / Survey Repairs
 Remarks : 3rd vessel to be docked in
 Keppel this year. Previously
 other 2 sister vessels, Cap
 Frio in Tuas (May) and
 Alianca Singapore in Benoi
 (June)

Name : **DWIPUTRA**
 Owner : Humolco Trans Inc
 Country : Indonesia
 Type : LNG Moss Rosenberg
 Year Built: 1994
 DWT : 70,563
 GRT : 104,968
 Date : 17 September – 10 October
 2006
 Scope : General / Survey Repairs
 Remarks : 3rd dry docking since 2000

Name : **AGATE**
 Owners : World Tankers Management
 Pte Ltd
 Country : Singapore
 Type : Oil Tanker
 Year Built: 1985
 DWT : 88,034
 GRT : 50,063
 Date : 3 September – 19 October
 Scope : Damage – Grounding
 Repairs
 Remarks : Company has also got 2
 other vessels in Tuas Yard
 at present (Akritori and
 Clovely)



MV "SHIRAOI MARU"



TIGER SPRING

Philippines

Subic Shipyard & Engineering

Name : **APL PANAMA**
 Client : Schlüssel Reederei KG
 Country : Germany
 Type : Container Ship
 DWT : 52,250
 GRT : 40,306
 Date : 7 June 2006 – 22 September 2006
 Scope : Drydocking, cleaning of contaminated damaged F.O.T. & ballast tanks, renewal of 820 tons bottom grounding damage. Propeller renewal; Bow thruster repair, tailshaft withdrawal, rudder pintle nut and bush renewal, rudder palm bolt renewal, twisted rudder stock repair, ballast tanks coating and hull painting

Name : **MV "SHIRAOI MARU"**
 Client : Kyokuto Shipping Co., Ltd.
 Country : Japan
 Type : Wood-chip Carrier
 DWT : 39,375
 GRT : 30,677
 Date : 19 – 26 September 2006
 Scope : Afloat repairs, cargo hold nos. 1, 2, 4 and 5 blasting/painting, cargo hold no. 3

hatch corner (aft/port) steel works repair, double bottom tank (port & starboard) ballast pipe repair

Keppel Batangas Shipyard

Name : **TIGER SPRING**
 Client : Chong Fui Shipping and Forwarding Sdn. Bhd.
 Country : Malaysia
 Type : Container
 DWT : 6,150
 GRT : 4,455
 Date : 7 August 2006 – 1 October 2006
 Scope : WBT replating, pipe fender renewal, anchor hawse pipe repair, CPP tailshaft repair, various deck replating and pontoon hatch cover repair

Name : **HOEGH TRAMPER (Ex-Hual Trampler)**
 Client : Hoegh Fleet Services AS
 Country : Norway
 Type : Vehicle Carrier
 DWT : 16,376
 GRT : 56,835
 Date : 9 – 22 September 2006
 Scope : Afloat works, main engine overhauling and new generator engine hauling & rigging

Keppel Cebu Shipyard

Name : **MV "SUPERFERRY 19"**
 Client : Aboitiz Transport System Corp.
 Country : Philippines
 Type : Cargo/Passenger
 DWT : 12,473.47
 GRT : 7,878.27
 Date : 29 July – work in progress
 Scope : Repositioning of aft side ramp, renewal of various hull plates/brackets above wagon deck. Electrical motors and engine room machineries overhauls, installation of shell fender extension, main switchboard cleaning, polishing propeller in-place, anchor & chains works, deck and engine room pipe renewals

Keppel Group | Newsbytes

KIE awarded solid waste project in Qatar ...

Keppel Integrated Engineering (KIE), the environmental technology and engineering arm of Keppel Corporation, has received notification of tender award by the Qatar Government to design and build an integrated solid waste management facility in Qatar and to operate and maintain the facility for 20 years.

The total value of the contracts is QR 3.9 billion (about S\$1.7 billion).

... and a waste-to-energy plant in China

KIE's subsidiary Keppel Seghers, has secured a S\$13.3 million contract to provide technologies and services for the first waste-to-energy (WTE) plant to be built in the city of Changzhou, Jiangsu province, China.

Keppel Seghers will provide its state-of-the-art equipment design and technical services for the grate, atomizer, automation control and flue gas cleaning components of the plant.

When completed in third quarter of 2008, the WTE plant will be able to treat 800 tonnes of municipal waste a day to generate 12MW of green energy.

SPC and partners discover gas

Singapore Petroleum Company (SPC) and its partners have discovered gas at the Wortel-1 exploration well in the Sampang PSC field in Indonesia.

Wortel-1 successfully tested natural gas and condensate following a drill stem test completed over the interval of 1,340 to 1,365 metres in measured depth. The well

flows gas at a rate of 18.5 million standard cubic feet per day through a 56/64" choke at wellhead pressure of 1,071 psi. Condensate was produced at a rate of four to five barrels per million cubic feet.

Wortel-1 is located approximately seven kilometres west of the Oyong field and about 75 kilometres south east of the city of Surabaya.

Keppel Land clinches prestigious FIABCI award

Keppel Land's *Caribbean at Keppel Bay* won the top prize in the residential category of the highly prestigious FIABCI Prix d'Excellence, an international award which recognises excellence in the real estate industry. The company's *HarbourFront Office Park* was also second runner-up in the Office/Industrial category.

The FIABCI award is not the only accolade won by *Caribbean at Keppel Bay* this year.

The luxury waterfront development also bagged the Gold Award (Implementation/Residential) at Landscape Industry Association (Singapore) Awards of Excellence 2006 and the Merit Award for Construction Excellence 2006 presented by Building Control Agency.

Keppel Land divests stake in Suzhou company

Keppel Land has entered into an agreement to sell its entire stake in Singapore Suzhou Industrial Holdings Pte Ltd (SSIH) to Ascendas China Trustee Pte Ltd for S\$27 million.

Upon completion of the sale, Keppel Land will book a profit of S\$9.53 million.

The sale of Keppel Land's stake in SSIH is part of the Company's strategy to unlock value from non-core assets and to focus on property development and funds management.



Caribbean at Keppel Bay bags top award

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Flying high for the king

Keppel FELS' Flying Squad took to the high seas on a round-the-clock mission for the king.

Working from heights of 100 feet above the deck, the men braved the gusty winds beating at 20 knots against their narrow frames to fix the starboard leg of *Ocean Sovereign*.

Even as they ploughed through the nights to complete the work of straightening the leg deflection as well as the repair of the racks, safety was never compromised. In fact, a staging foreman was also sent ahead of the crew to supervise the scaffolding setup and workplace safety.

The arduous assignment off the coast of Surabaya, Indonesia, required the team to make improvisations on site.

Describing the challenges, Keppel FELS Project Superintendent Goh Khar Poh, said, "Initially, we had inadequate lifting facilities as the crane was not high enough. So we set up an air tugger and pulley system, kept them in position and performed our lifting operations. The difficulties downstream were overcome by sheer hard work, great teamwork and our strong commitment to customer satisfaction."

Despite a last minute discovery that two more bracing pipes needed to be replaced, the team who exuded the 'Can Do' spirit, still managed to complete the whole operation ahead of time.

Khar Poh commented, "Thanks to the support and efficiency of Avery Littlefield, Offshore Installation Manager (OIM) and his crew, we managed to accomplish our repairs three days ahead of schedule."



Working assiduously through the salty winds

In a letter to Flying Squad team, Mr Littlefield commended them on the service and repairs.

He wrote, "The team led by your outstanding Superintendent, Goh Khar Poh, had exhibited great professionalism and your renowned 'Can Do' spirit in the job execution. It is an additional achievement for your team on completing the job ahead of schedule and with zero accident.

"On behalf of everyone involved here at *Ocean Sovereign Rig 169*, please accept our sincere appreciation for a job well done!"

Ocean Sovereign suffered damage to its starboard leg while working off Surabaya, Indonesia in August. Its owner, Diamond Offshore, called in Keppel FELS' rig doctors, the Flying Squad, to examine it.

A two-man advance party was sent on board the rig to survey the damage. The team found the leg rack on one chord damaged in the stressed area, while the chords and bracing pipes suffered major deflection.

Once the diagnosis was made, Keppel FELS immediately set about organising a team of skilled workers and preparing bracing materials to be sent to the rig by boat. Before long, the full team arrived and completed the repair in under a month.

Keppel FELS first built the *Ocean Sovereign* in 1981 and more recently in 2003 completed water depth upgrades and major repairs when it was brought in by Diamond Offshore. The upgrade significantly extended the useful life and capabilities of the rig.