

# Offshore Keppel Marine

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Offshore  
**Fourth Indian rig  
order in six months**

**New semi contracts**

Marine  
**FPSO conversion &  
repairs**

**The delivery of *SeaDrill 3***

**Keppel yards are ISPS compliant**







Staying vigilant

Page 22



Keppel at OTC 2006

Page 30



Double celebrations for the Keppel/Smit partnership

Page 34

## FEATURES

Positioning Keppel for the future	3
Optimising Keppel's global capacity	7
Riding the semi wave	12
More FPSO conversion and repair at Keppel	14
P-52 – An engineering feat	16
First double-hull conversion completed	19
A promise delivered	20
Keeping on track	26
Solutions for deepwater	37
Fourth jackup rig from India	44

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# Positioning Keppel for the future

Keppel Offshore & Marine's (Keppel O&M) current excellent performance is a result of many years of hard work and strategic commitment to the industry, shares Chm & CEO Choo Chiau Beng (CB Choo) in the group's Annual Report for 2005. *OffshoreMarine* publishes excerpts of his message.

## Delivering Results

**K**eppel O&M achieved another sterling set of results for 2005. Apart from sustained high oil and gas prices, our strategy of delivering value through consistent engineering and operational excellence was the main contributing factor.

During the year, we delivered two jackup rigs, one drilling tender, one semisubmersible accommodation platform and 15 offshore support vessels (OSVs) and tugs. We also completed the Singapore scope of work for the *P-51* and *P-52* floating production units as well as the conversion of the surveillance semisubmersible platform and a floating production storage and offloading facility (FPSO).

These projects together with work-in-progress contributed to group revenue, which increased to S\$4.07 billion from S\$2.39 billion in 2004. This represents a 70% improvement over the previous year. Attributable profit before exceptional items grew 22% to S\$231.5 million.

Our return on equity increased to 34.3% from 32.3% in 2004, while economic value added rose by S\$58 million to S\$182.6 million.

In terms of contracts secured, 2005 set a new record. The value of contracts secured amounted to S\$6.54 billion, more than double that of the previous year. A net orderbook of S\$7.2 billion worth of work was carried forward into 2006, with project deliveries stretching into mid 2009.

## Reviewing 2005

2005 was the most buoyant year for the rig market since 1980. The recovery started at end 2004 and continued into a boom year in 2005 for the offshore oil and gas market.

Oil prices, which averaged US\$38 per barrel in 2004, headed north in 2005 hovering around the US\$60 mark, encouraging oil companies to invest in exploration and development projects at record levels.

Driving the oil price hike was surging demand for hydrocarbons against the backdrop of tight supplies, growing uncertainty in major oil producing countries and disruptions to supply arising from hurricanes Katrina and Rita, as well as events in Iraq and Nigeria.

Overall, utilisation levels for jackups and deepwater floaters reached full capacity in most regions around the world. With demand easily outstripping supply in many rig markets, day rates in all rig categories escalated to unprecedented highs. Day rates for deepwater floaters were approaching US\$500,000, while premium jackups of the types designed and built by Keppel were commanding in excess of US\$150,000.

As the drilling rig market strengthened, the demand for newbuilds also took off, with 50 new rig orders, comprising 33 jackups, 14 semisubmersibles, two drillships and one tender rig, with options to build an additional 17 units. This compares with just nine orders placed in 2004.



CB Choo

Of these newbuild orders, the Keppel O&M group secured a total of 19 jackups, three semisubmersibles, one tender rig, barges and piperacks for the Kashagan field in the Caspian Sea and 17 OSVs and tugboats. In the conversion market, four FPSOs and a pipelayer were also clinched.

The shipping market saw an increase in charter rates and new tonnages. Our shiprepair activities grew moderately on the back of continuing strong international shipping despite stiff competition as owners were more willing to spend on maintenance and upgrading. With healthy global economic growth and more ships coming on stream, the market for shiprepair and maintenance should continue to improve.

Continued on page 4 ►



Keppel FELS delivered jackup *Al-Hail* 18 days ahead of schedule



The trust between Keppel and its customers has resulted in many long and successful partnerships

◀ *Continued from page 3*

### Building Sustainability

Our current excellent performance is a result of many years of hard work and strategic commitment to the industry.

We will continue to follow our strategy of building a sustainable business for the long term. This means ensuring that our business remains nimble and competitive, able to leverage the manifold talents of our managers. As such, developing people and harnessing technology, either through R&D or acquisitions, remain key to our pursuit of business sustainability.

The integrated nature of our global business operations gives us flexibility and speed to draw on the combined strengths of the assets, resources and expertise of our 17 shipyards. During the year, we made careful capital investments in several yards to prepare them to take full advantage of the current boom in the offshore market.

Drawing upon our global network, we will continue to pursue our 'Near Market, Near Customer' strategy to better serve our customers. Entering into alliances for new business initiatives and new markets as well as augmenting our information technology platforms and knowledge

bases remain integral to our strategic direction. To this end, the group launched in February 2006 an e-Directory of Experts, a reference list of specialists in more than 100 different areas. This enables Keppelites to tap in-house experts for guidance and sharing of best practices.

### Managing Execution

There has been no let up in the strength of rig demand as evidenced by Keppel's orderbook.

To meet the unprecedented level of activities, we are increasing capacity, enlarging our skilled manpower base and re-engineering our work processes.

Keppel Shipyard's Gul and Benoi yards in Singapore, which were our shipbuilding and shiprepair yards, have invested in new equipment and workshops to cater to the offshore business. Keppel Batangas in the Philippines upgraded its facilities and retrained its workers for offshore work in order to support Keppel FELS in fulfilling its orders.

During the year, we also acquired a shipyard in Nantong City near Shanghai. We refurbished it into a specialised shipbuilding yard to support Keppel Singmarine. Currently, six of Keppel Singmarine's OSVs have been slated for construction there.

In each of the new offshore facilities, customer satisfaction remains our top priority. Careful planning has been put in to replicate the group's proven shipyard management system in these new yards. Apart from training, this also entails attachment of a relatively large pool of experienced personnel to work closely with local management and staff.

### Driving Growth

Keppel's offshore leadership primarily lies in the drilling sector. Whilst our present focus is in extracting maximum value out of the current rig boom, our sights are also set on driving new growth initiatives, particularly in the deepwater oil and gas production sector.

Deepwater oil and gas production has been increasing rapidly and expenditures are predicted to reach US\$20 billion per year by 2010. Current deepwater oil production accounts for only 10% of total offshore oil production, and is expected to increase to 25% by 2015, with the advent of new and more innovative technology, mainly in mooring systems and hull designs.

Some US\$30 billion is likely to be spent on deepwater floating production systems and another US\$40 billion on drilling and completing subsea wells. We have set up



a joint venture, FloaTEC, LLC, with J Ray McDermott, a leading provider of solutions for offshore field development worldwide, to market our joint venture's proprietary deepwater production solutions in SPARs, Extended Tension-Leg Platforms (ETLP), Single Column Floaters (SCF) and semisubmersibles.

Drawing on Keppel and J Ray's expertise, as well as the skills of the experts whom FloaTEC, LLC, has assembled, the company is poised to realise its vision of providing the entire package for deepwater production systems from conceptual work to managing delivery of engineering, procurement and construction.

### Developing People

The Keppel O&M group was founded and built on the passion of its people. Technology, machinery and tools, while important, are the means by which our people achieve success. To further deliver consistent performance, we have to continue to invest in our people. We must

attract and retain the best. A total of S\$3.6 million was invested in developing our human capital in 2005. The budget for 2006 has doubled to nearly S\$8 million.

During the year, we rolled out two programmes in management development and leadership succession for our budding talents. They aim to equip our people to meet new business challenges and to deal with issues arising from operating in a global environment. We also expose our young talents to top management thinking by involving them in strategic meetings to gain insights into the opportunities, challenges and risks of our business. Cross-border attachments, which are tied to career advancement, are also included to hone skills and aptitude.

### Augmenting HSE

Our aim in Health, Safety and Environment (HSE) is very simple. We want every direct and subcontract worker to be able to return home accident-free.

I am happy to report that many of our projects were completed without a single lost hour despite the increased workload. Our customers are recognising this and are working with us to reward our workers.

Our Singapore yards, where the bulk of our activities are located, recorded a 10-year low of 1.62 and 39 in accident frequency and accident severity rates respectively in 2005. We beat the respective industry rates of 2.8 and 175. These rates measure the reported accidents per one million man-hours worked.

To augment our HSE efforts, we plan to further strengthen workers' awareness of safety through education, training and monitoring. We have also developed schemes to motivate workers, mobilise the support of the unions, subcontractors and government agencies, as well as use professional expertise to raise the benchmark for best practices. The aim of all our initiatives is to further strengthen our safety system, enhance individual

*Continued on page 6 ►*



Keppel Shipyard continues to strengthen its leadership in shiprepair and conversion

◀ Continued from page 5

ownership towards safety and focus on the management and assessment of risks.

### Salutations

I would like to thank our customers for the trust and confidence that you have placed in us. We look forward to more successful partnerships with you.

I would like to acknowledge the support and co-operation of all the local, state and federal authorities in the countries where we have operations, as well as of the Class and Registries. My thanks also go to all our suppliers, subcontractors and vendors whom we regard as our partners to ensure the success of our projects.

My deepest appreciation goes to my colleagues and staff for their passion and hard work. I am proud to be part of this global family of 20,000 people. Your 'Can Do!' spirit in serving our customers with the highest level of commitment and integrity has contributed enormously to the growth of our group.

With its proprietary suite of deepwater solutions, the group is poised to serve the growing deepwater drilling and production market



I am also grateful to our Board for their invaluable contributions. On 17 March 2006, John Huff, my good friend of many years, will step down. John has served on the Board since its formation in 2002. On behalf of the group, I would like to

convey my gratitude to him. We will miss his wisdom and counsel.

To all our stakeholders, thank you for your continuous support and interest in Keppel.

## Director John Huff retires



Director John Huff and wife Karen with CB Choo and wife Eileen

**J**ohn Rossman Huff has stepped down as Director of Keppel O&M after serving on the Board for almost four years.

At the retirement dinner held in John's honour in Houston, CB Choo thanked John for his significant contributions and friendship to Keppel O&M. He shared how John, with his vast experience in the oil and gas and offshore marine industries, has provided many insights to industry trends and knowledge.

The Board, management and staff of Keppel O&M would like to thank John for his invaluable contribution to the company during his term of office, and extends its best wishes to him for the future.



# Optimising Keppel's global capacity

Net orderbook for Keppel O&M reached an all time high of S\$7.2 billion in 2005, representing a two-fold increase over the corresponding period in 2004.

MD & COO Tong Chong Heong (CH Tong) shares in Keppel O&M's Annual Report 2005 on how the group has geared up to manage the burgeoning backlog.

*OffshoreMarine* reproduces extracts of the interview.

**Your huge orderbook comprising largely offshore rigs grew rapidly in the last one year. Where do you find the additional capacity to meet the immediate needs of fulfilling the orders?**

**R**ig building is both art and science, and not just about space. Resource planning and management, design, engineering and procurement are critical factors. Our ability to take on more jobs and deliver them on time depends on how we balance all the factors and maximise the utilisation of resources during each phase of a project. It takes wit and skill that come with experience.

We benefited from the integration of our yards under Keppel O&M in 2002. By bringing 17 yards in one centrally controlled and yet locally managed system, we have been able to respond swiftly to changing market conditions.

In early 2005, we already noticed increasing market demand, and were upgrading Keppel FELS facilities and exploring outsourcing work. We started enhancing the facilities of the former Keppel Singmarine yard across the road from Keppel FELS' Pioneer yard. This 140,000 sqm former Marathon LeTourneau yard currently yields an additional steel output of 22,000 tonnes. Its proximity to Keppel FELS yard also allows it to support various engineering and assembly activities.

We also leveraged Keppel Shipyard and Keppel Singmarine's facilities, optimising and converting them to undertake offshore work. In this way, we ramped up capacity quite quickly.

Preparing and equipping Keppel Batangas for offshore work took a little longer as it involves blending soft and hard skills with the setting up of new workshops, craneage and fabrication grounds. We have to impart expertise, transfer technology, and imbue offshore mindsets, which are very different from marine.

The Philippine facility yields an additional throughput of approximately 8,000 tonnes of steel per annum, after the installation of panel line shops, additional craneage, mobile shelters and fabrication areas. Additional capacity has been raised through subcontract work to reliable third-party facilities, with effective control of quality and timeliness.

In addition, we draw on the synergy of our global network of shipyards to offer unparalleled services with fast turnaround time. Our yards in different parts of the world co-operate to undertake joint projects to meet the requirements of clients. Examples of this kind of synergistic services are the construction of the *P-51* and *P-52* floating production platforms and the refurbishment and life extension of a semi, the *Blackford Dolphin*.

(See map on page 8 which shows the facilities that have been upgraded in 2005



**CH Tong shares how the group has geared up to meet strong demand**

and the co-operation amongst the Keppel yards.)

**It does not look like there is a let up in the demand for rigs. With your orderbook for 2008 being quite full, it appears you might not be able to protect your market share from competitors and new entrants promising deliveries in 2008.**

Competition has always been there, and more competitors are expected to enter the market especially in the current tight supply situation. For those of us who are committed to be long-term players in the offshore industry, competition is good for it keeps us fighting fit.

*Continued on page 8* ►

# OPTIMISING GLOBAL CAPACITY

## Keppel FELS Brasil

- The dredging of the Jacuecanga channel in front of BrasFELS yard was permitted by Rio's State Foundation of Engineering & Environment
- Dredged 12.25 m deep, 1,100 m long and 150 m wide so that P-51 & P-52 can move in and out of the yard
- BrasFELS can execute future mega projects requiring deep draft

**Keppel FELS**  
Detailed engineering

**Keppel Shipyard / Arab Heavy Industries**  
Fabrication of the lower and upper hulls as well as modules jointly with Keppel Verolme

**Keppel Verolme**  
Overall integration, repair & maintenance of *Blackford Dolphin*

**Keppel FELS**  
Fabrication of entire hull in five strips

**Caspian Shipyard Company**  
Integration of hull & installation of jackhouse, machining & inter-strip outfitting work

## Keppel Nantong Shipyard

- Upgraded with new facilities including a mechanical launching system, mechanical transfer system, additional craneage, pipe-bending and steelplate-cutting machines
- Employment of skilled workforce
- Construction of six OSVs

## Keppel Batangas

- Installed facilities such as panel line system, block assembly areas and heavy construction equipment & additional craneage
- Concrete flooring at assembly area
- Steel output per annum: 7,300 tonnes
- On-going training & technology transfer to local workforce



### LEGEND

- Route taken by modules of floating production units, P-51 and P-52
  - Route to be taken by modules of semisubmersible *Blackford Dolphin*
  - Route to be taken by blocks of ultra deepwater semi *ENSCO 8500*
  - Route taken by the five strips of the BP Shah Deniz *TPG500*
- FSTP** Consortium comprising Keppel FELS, Keppel FELS Brasil and Technip

**Keppel FELS**  
Corner nodes of the lower hull

**FSTP**  
Lower hull, deckbox, topsides, living quarters, commissioning

**Keppel FELS**  
Lower hull

**FSTP**  
Deckbox, topsides, living quarters, commissioning

## Keppel FELS

- Upgraded facilities, increasing capacity by 100%
- More panel lines, upping steel output by 45,000 tonnes
- Greater craneage at new assembly areas
- Added two more blasting and painting halls, bringing the total to seven environment protection halls
- Added a 800-tonne transporter

## Keppel Shipyard

- Installed a total of 16 new mobile shelters, eight gantry cranes, five overhead travelling cranes, and a twin-hoist gantry crane, and built new fabrication sites

## Keppel Singmarine

- Introduced new pipe bender machine
- New panel line
- Widened slipway mouth and strengthened structures for concurrent construction of larger vessels and jackup rigs
- Transferred some shipbuilding activities to Keppel Nantong yard, freeing up space for rigbuilding

**Keppel Batangas**  
Lower hull of *ENSCO 8500*, an ultra deepwater semi drilling platform

**Keppel FELS**  
The rest of the work integration of the blocks



◀ *Continued from page 7*

During the bust time in the 80s while many yards folded, we tightened our belt, kept skilled manpower, strengthened our technology base and developed proprietary designs through innovative business arrangements and strategic alliances to become the market leader that we are today.

Protecting market share is important, and we will continue to do that, but our real challenge lies in how we continue to differentiate ourselves from others to be the best in the industry. We want to be the provider of choice and partner in solutions for our customers. In this regard, I am proud to note that most, if not all, drilling contractors choose to build with us. As long-term players, they know us well, and are assured that our promises are as good as our deliveries, on time and on budget.

Building a rig involves tremendous teamwork, as well as greater engineering content and more stringent compliance with HSE and a host of regulatory requirements unique to individual fields, as compared with say, a tanker. These do not come overnight.

**Are there any more existing facilities that can be maximised for delivery? Are you looking at further expansion of your capacity through building new facilities or acquisitions?**

We are looking at expanding our facilities in Singapore and elsewhere in the region. This includes an Indonesian facility on Bintan Island, which could produce some 6,000 tonnes of steel per annum (refer to box story on the Bintan facility).

**How are you going to maintain the same quality products and services that you are reputed for?**

Consistency in the quality of work we produce can come about only when

everyone subscribes to the company's vision of becoming the provider of choice and partner in solutions in the segments we serve. Only in doing so can we proactively engage all our employees to raise themselves to standards that are synonymous with the Keppel name, regardless of whether the yard is in Singapore, Philippines or Kazakhstan.

Let me cite an example. The facilities at Keppel Batangas were recently ramped up to meet the growing offshore demand. However, way before we struck steel for its first offshore project, the lower hull of semi *ENSCO 8500*, we were already training and developing the local workforce to undertake offshore rig construction-related work. A contingent

*Continued on page 10* ▶



Equipping employees of Keppel Batangas for offshore work

## New offshore fabrication yard on Bintan Island

Keppel FELS has entered into a joint venture agreement to establish Bintan Offshore Fabricators Pte Ltd (Bintan Offshore).

Keppel FELS holds 60% interest in the joint venture, Bintan Offshore. The principal business activity of the company is to undertake fabrication work for projects secured by Keppel FELS.

The joint venture has located a suitable site on the south-east coast of Bintan Island, Indonesia, for the fabrication facility.

Michael Chia, ED of Keppel FELS, said, "This move to establish our own facilities is to ensure quality control and timeliness of project deliveries. These two factors are vital in our business. Bintan is close by, and control of work processes is therefore expected to be much easier."



Keppel FELS' Pioneer Yard increases its capacity with new facilities

◀ Continued from page 9

of 23 engineers and workers from Keppel Batangas was also posted to Keppel FELS for on-the-job training. In addition, a team of Keppel FELS supervisors was also sent to support the locals.

### How do you continue to take care of customers' needs and requirements?

It is imperative that we continue to maintain the confidence our customers have in us. This is translated to making sure that our projects are constantly carried out according to schedule and our documentation for these projects are maintained up to speed. This saves time for our customers working with us. For instance, when ENSCO representatives go over to the Philippines for their regular inspection of ongoing works for the ENSCO 8500 project, we facilitate and optimise their time to enable them to track the progress of their project with ease.

### With your workforce and capacity so stretched, would it be likely that you may fall back on delivery schedule?

No, we are committed to maintaining our reputation of being on time and on budget for our projects.

Our people's ability to meet production schedules is closely tied to their welfare, health, safety and the environment. We strive to provide them a holistic environment in which to work in. Apart from a fair compensation framework, we also create opportunities for our employees to have time for play and family. This includes organising recreational activities and encouraging volunteerism through social and community activities for the underprivileged.

Over and beyond these, we are aware of the potential threats such as avian flu, terrorist attacks and force majeure, which can easily curtail the business cycle. Whilst these situations are beyond our control, Keppel has a robust management system that will safeguard our stakeholders' interest even in such instances.

### Offshore business is cyclical, and the good time will one day end. How are you going to take care of the huge overhead costs accumulated during this period?

We have been very prudent in the financial management of all our

investments and assets. We always keep an eye on market trends. As the market changes, so will our focus in order to remain relevant to our customers.

Notwithstanding the present boom in the drilling market, we are strengthening our business in the provision of offshore production solutions, particularly in deep and ultra deepwater environments. This is because the current high level of drilling activities supported by the increasing global consumption of energy should translate into business opportunities for us.

Besides, while the offshore and marine business is cyclical, there is always a need for maintenance, repair, conversion and upgrading of rigs and vessels. With yards located near our markets and close to our customers, as well as a larger fleet arising from the current new orders, we should expect a regular baseload of work.

In a tight demand situation, strong brand equity counts, and Keppel has a track record for world-class repair and conversions, whether they are FPSOs, FSOs, semis or jacking rigs.



# Mission possible

**W**orks on the two accommodation platforms awarded to the Keppel SLP Consortium in an international tender by PEMEX Exploración y Producción (PEP), a subsidiary of Petróleos Mexicanos (PEMEX), Mexico's national oil company, are well underway.

In a short span of six months of construction in Keppel AmFELS, the five-storey accommodation modules, HA-KU-S and HA-KU-M, are ready for launching and offshore installation.

The platforms are built by the Keppel SLP Consortium, comprising Keppel O&M USA, SLP Engineering, Keppel AmFELS and Gulf Island.

Keppel O&M USA and SLP Engineering are jointly undertaking project management, design, engineering, procurement, hook-up and commissioning of the platforms. Keppel AmFELS is building the accommodation modules while Gulf Island is fabricating the jackets, piles and deck leg modules.

In the third quarter of 2006, the two 3,600-tonnes accommodation platforms are scheduled to be installed onto their jackets on-site in the Cantarrell field in the Gulf of Mexico. Installation of the jackets and platforms will be undertaken by PEP.

Beto Sierra, Project Manager of Keppel AmFELS, shared, "It has taken a great effort by all the companies in the JV team working on the PEMEX projects to get to this point. We have been able to overcome the challenges faced in the course of the project amicably, and we are confident of delivering the platforms within the agreed schedule."

By early May 2006, the project had achieved a total of over one million manhours worked without lost time incidents.

Keppel AmFELS delivered a KFELS B Class jackup drilling rig, TONALA, to Perforadora Central for service with PEMEX, in 2004. Ranked the eighth

largest integrated oil company in the world, PEMEX is the sole producer of Mexican crude oil, natural gas and refined products. The company has been increasing crude and gas production in anticipation of rising domestic consumption and hydrocarbon exports. Mexico is the third largest producer of crude oil globally.

Located along the Brownsville Navigation Ship Channel in Texas, Keppel AmFELS is the best-equipped offshore rig construction yard in the Gulf of Mexico.

UK-based SLP Engineering is a market leader in selected energy and utilities markets.

Gulf Island is a specialised fabricator of jackets and other offshore structures in the Gulf of Mexico.

**The two PEMEX accommodation modules, HA-KU-S and HA-KU-M, under construction at the Keppel AmFELS yard**



# Riding the semi wave

The growing needs of emerging economies will fuel the demand for energy. Top international oil and gas companies have identified deepwater E&P as a key element in meeting this upsurge in demand. Keppel has positioned itself to offer the industry technology, construction and upgrading expertise.

## Fourth semi for Maersk

**K**eppel FELS has secured a contract to build a repeat ultra deepwater semi drilling platform for A.P. Møller – Mærsk.

This contract follows the exercise of an option given to Maersk Contractors when it ordered two semis in May 2005.

This will be the fourth semi that Keppel FELS is constructing for Maersk Contractors. Keppel FELS successfully delivered the first semi, *Maersk Explorer* to Maersk Contractors in 2003. In addition to the deepwater semis, Keppel FELS is currently also building four jackup rigs for Maersk Contractors.

Claus V. Hemmingsen, CEO of Maersk Contractors, shared, “The increasing demand for energy will continue to spur growth in development activities in deep water. As such, there is a need for more highly efficient rigs to meet this growing need.

“We are happy with the progress of our two deepwater semis currently under construction at Keppel FELS and have decided to award the yard the contract to build our next newbuild. Keppel FELS has proven that it is a competent partner for the provision of cost effective and capable rigs.”

Said CH Tong, “Deepwater oil and gas production activities have been increasing and expenditures are predicted to reach US\$20 billion per year by 2010.

“We at Keppel recognise this trend towards deepwater exploration and production and have positioned ourselves to offer an entire package of deepwater technology solutions.

“We are pleased about Maersk Contractors’ confidence in Keppel’s abilities to provide solutions that will meet stringent requirements to quality and innovation.”

Under the agreement, Maersk will supply the drilling and other equipment. Similar

to the first two rigs, this new semi will be built to the proprietary design, the DSS-21, co-developed by Keppel’s Deepwater Technology Group (DTG).

The semi will be equipped with a dynamic positioning system, which can be attached to a pre-laid mooring system. It is suited for operations in moderate environmental conditions such as West Africa, Brazil, Gulf of Mexico and Southeast Asia in water depths of 3,000 metres or 10,000 feet. It can accommodate up to 180 persons.



Keppel FELS will construct a fourth semi for Maersk. Seen here is *Maersk Explorer*, which was delivered in 2003



Delivery of this new deepwater semi is expected in the first quarter of 2010. Meanwhile, the two semis under construction are scheduled for delivery in the first quarters of 2008 and 2009 respectively.

Maersk Contractors is part of the A.P. Møller – Mærsk Group, and is a leading drilling contractor and supplier of floating production solutions.

### Two semi upgradings for Transocean

Meanwhile, Keppel FELS and Keppel Verolme have also each clinched a contract from Transocean Inc. (Transocean).

Each contract is for the upgrading of a Sedco 700-series semi drilling rig. The two Keppel yards reap substantial synergy with respect to engineering, purchasing and pre-fabrication works.

“Keppel is delighted to be selected as the partner of choice for Transocean in the upgrading of the two floaters. Leveraging our integrated network of yard facilities and expertise, we are confident that the projects will be well executed on time, on budget, for our valued customer,” said CH Tong.

Chartered to a Shell affiliate, the 700-series floater to be renewed and upgraded at Keppel FELS in Singapore is expected to be delivered in end 2006.

Upgrading of the second rig at Keppel Verolme in Rotterdam is scheduled for completion around October 2007.

The scope of work for both vessels include converting them to full Dynamic Positioning (DP) capacity capable of drilling, completion and work-over in up to 2,000 metres of water depth in moderate environments. This covers the addition of thrusters, DP control and blow-out-preventer control systems,

increased power plant, riser tensioner and mast capacities, as well as increased variable deck load, hull repair and overhaul of drilling equipment.

A regular and valued customer, Transocean has awarded the Keppel O&M group several significant projects, and one of these is the construction of *Trident 20* jackup rig. Completed in 2000, *Trident 20* made history as the first international class rig to be built in the Caspian Sea.

Apart from the upgrading of the two 700-series floaters, the Keppel O&M group continues to repair various Transocean rigs. Two of the latest repair jobs involve the modification of jackup rig *J T Angel* by Keppel FELS and semi, *Transocean Marianas*, by Keppel AmFELS. The latter was completed in March 2006.

Transocean Inc. is the world's largest offshore drilling contractor with a fleet of 90 mobile offshore drilling units.



Keppel FELS and Keppel Verolme will each undertake the upgrading of a Sedco 700-series semisubmersible drilling rig for Transocean. Shown above (left) is the semisubmersible that Keppel FELS is upgrading

# More FPSO conversion and repair at Keppel

## *Ellen Maersk*

**K**eppel Shipyard has secured the conversion of a tanker to a FPSO from Maersk Contractors.

The workscope on the fast-track conversion of VLCC *Ellen Maersk* to an FPSO includes the installation and integration of the topside modules; the fabrication and installation of the internal moonpool for the turret, flare tower, piperack and helideck; and the upgrading of the accommodation.

The 308,000 dwt VLCC *Ellen Maersk* was built in 2000. It measures 333 metres in length and 58 metres in breadth.

It is expected to arrive in Keppel Shipyard in early 2007 and be completed by early 2008. It will be leased to Woodside Energy Ltd, Australia's largest publicly traded oil and gas E&P company for deployment in the Vincent Field, Western Australia.

The FPSO will be capable of producing 120,000 bopd with a storage capacity of 1.9 million barrels. The vessel will be moored in water depths of 400 metres. First oil is anticipated in 2008.

Keppel Shipyard will undertake the conversion of VLCC *Capella* to FPSO *Mondo* for SBM



Paul Carsten Pedersen, Senior Vice President of Maersk Contractors, said, "We have entrusted Keppel Shipyard with the conversion of the FPSO as a result of their strong track record. We have been impressed with Keppel Shipyard's good reputation of excellent and reliable project management."

Nelson Yeo, ED of Keppel Shipyard, said, "We thank Maersk Contractors for their vote of confidence in awarding Keppel Shipyard with this FPSO conversion project. We are committed to our promise of delivering quality projects on time and on budget."

The Keppel O&M group has recently completed the construction of a semisubmersible for the A.P. Møller – Mærsk group, as well as carried out the conversion of FPSO *Alvheim* in which Maersk Contractors was the project manager under Marathon Petroleum Company (Norway). It is currently carrying out the construction of a series of four jackup rigs and three semisubmersibles.

Maersk Contractors is a leading drilling contractor and supplier of floating production solutions.

## *FPSO Mondo*

Keppel Shipyard has secured a contract for the conversion of the VLCC *Capella* to FPSO *Mondo*. This is the eighth such project that Keppel Shipyard is executing for Single Buoy Moorings Inc (SBM) since 2000. The vessel is expected to be completed in third quarter 2007.

Nelson shared, "We have recently completed the conversion of the FPSO *Capixaba* for SBM and are delighted to be awarded the new project with them. This speaks of the strong partnership we have built with SBM over the years."





Keppel Shipyard is a leading shipyard in the conversion of FPSO facilities. The company has earlier worked with Maersk Contractors on the conversion of the FPSO *Alvheim* for Marathon Petroleum Company

The scope of work on the former VLCC *Capella* includes the installation and integration of the topside modules, installation of an external turret and helideck, fabrication and installation of a flare tower and bow modification work. Built in 1975, VLCC *Capella*, of 273,000 dwt, is 337 metres in length and 54.5 metres in width.

When completed, the floating system will be leased by SBM to ExxonMobil for deployment in Mondo Field, Block 15 offshore Angola for the Kizomba C Development.

FPSO *Mondo* will be capable of processing 100,000 bopd with a storage capacity for 1.6 million barrels. The vessel will be moored in water depths of between 720 and 760 metres.

Keppel Shipyard has undertaken seven highly successful conversion projects since 2000 for SBM. They are FPSO *Espadarte*, *Yetagun FSO*, *FPSO Falcon*, *FPSO Brasil*, *FPSO Serpentina*, *FPSO Marlim Sul*, and *FPSO Capixaba*. FPSO *Falcon* and *FPSO Serpentina* were undertaken for operations in West Africa by ExxonMobil.

Keppel Shipyard is currently carrying out

five other FPSO and FSO conversion and upgrading projects at its yards. Major conversions projects include the floating production unit, *P-53*, for Petrobras, as well as two FPSOs from Prosafe Production.

With operating offices in Monaco, SBM owns and operates a large fleet of FPSOs and FSOs and is the largest member of the SBM Offshore NV Group.

### **Terra Nova FPSO**

Meanwhile, Keppel Verolme, is strengthening its track record in the repair and conversion of FPSOs.

Keppel Verolme has secured an agreement with Petro-Canada (East Coast) for the repair of *Terra Nova FPSO*. The scope of work comprises maintenance, inspection and modification activities on both hull and process topsides systems of the *Terra Nova FPSO*.

Maintenance work to be carried out includes survey and overhaul of thrusters, underwater maintenance and coating, and repair to the vessel and the process systems. Inspection and modification works cover the testing of cargo tanks

and pressure vessels, extension of the accommodation quarters and modifications in the process modules.

The *Terra Nova FPSO* is operated by Petro-Canada, one of the largest integrated oil and gas companies in Canada. It has the largest interest in *Terra Nova*, which is co-owned by ExxonMobil Canada Properties, Husky Terra Nova Partnership, Murphy Oil Company Limited, Mosbacher Operating Limited, Norsk Hydro Canada Oil & Gas Inc. and Chevron Canada Resources.

The vessel is expected to arrive at Keppel Verolme by mid July 2006. It is scheduled for delivery and deployment in the *Terra Nova* field, located 350 km ESE of St John's, Newfoundland, Canada, by mid September 2006.

Keppel Verolme's yard spans over 54 hectares in Rotterdam's Botlek area. It has three drydocks, and its largest dock has a capacity of up to 500,000 dwt. Measuring 90m wide with deep water in front, Keppel Verolme has the widest graving dock in Europe and is able to undertake repair and conversion of some of the world's largest semisubmersibles.

# P-52 – An engineering feat

P-52 is testament to the naval engineering and expertise of Keppel FELS, Technip and Petrobras for deepwater production projects.



A technical and teamwork marvel – P-52



Three months after her arrival (left), the P-52 lower hull was anchored and submerged on location, in anticipation of the mating with the upper hull



In June 2006, three months after the arrival of the lower hull of P-52 in Brazil, the Keppel FELS-Technip consortium has more reasons to cheer as they celebrated another historical moment for the project.

The consortium successfully completed the offshore mating of the 25,000-tonne topside and 4,500-tonne spider deck with hull structure weighing 17,500 tonnes, for P-52, one of the world's largest floating production platforms.

Considered one of the most challenging phases in this project, this was the first time a deck mating operation was carried out in Brazil.

The lower hull was constructed by Keppel FELS in Singapore whilst the upper deckbox and modules were built by Keppel FELS Brasil in its BrasFELS yard.



Witnessing the proud moment are (from L) Renato Duque, Petrobras' Director for Services; CH Tong, Antônio Carlos Justi, Petrobras' Roncador Field Manager and Tay Kim Hock, Keppel FELS Brasil's CEO

The second phase involved the hoisting of the spider deck to the topside. The third phase will be the installation of the 600-tonne burner tower



The mega marine mating operation comprised three phases. The first phase was concluded successfully in 24 hours on 10 June 2006. It entailed placing the deck box and modules (which included parts such as the process, energy generation and gas compression, accommodations, utilities and heliport) onto the lower hull structure

# Moving swiftly in Keppel Shipyard

In just one month, Keppel Shipyard has successfully completed two fast-track conversions of FSOs. They were *Federal 1* and *FSO Shanghai*.

*Federal 1* became Federal Offshore Services Pte Ltd's first FSO vessel, while *FSO Shanghai* was the third conversion project undertaken for Tanker Pacific Offshore Terminals.

"Keppel Shipyard has further built on its track record with the delivery of the first two FSO conversions in 2006 on time, on budget.



Upon delivery, *FSO Shanghai* was deployed to support Santos (Sampang) Pty Ltd's Oyong Field, off Madura, Indonesia



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18 May 2006

Mr. Nelson Yeo,  
Executive Director,  
Keppel Shipyard Limited

Dear Nelson,

**CONVERSION PROJECT OF 150,000 DWT VESSEL "FEDERAL I" INTO FSO STATUS**

On behalf of my colleagues, and especially those from Federal Offshore Services Pte Ltd, we would like to express our heartfelt appreciation to you and your team, including the Operations team, for the completion of the conversion project of the 150,000 DWT vessel "Federal I" into FSO status.

We are extremely delighted that Federal and Keppel Shipyard have partnered so well to complete the fast-track project of converting a tanker into a FSO vessel within a short period of two months. This record completion period of two months was indeed a coup which entailed seamless co-operation, strong team spirit and sheer hard work on the part of all involved in the project.

We therefore like to commend and congratulate your team for a great job done, and we look forward to collaborating closely on more of such projects in the future.

Thank you once again for making this project a success.

Sincerely yours  
FEDERAL INTERNATIONAL (2000) LTD.

  
Koh Kian Kjong  
Executive Chairman & Chief Executive Officer

"We have achieved this through the close cooperation of our two valued clients and look forward to their continued partnerships with Keppel," said Keppel Shipyard ED, Nelson Yeo.

Within two months, *Federal 1* was converted from a Suez-Max tanker into a FSO with one million barrels of oil storage capacity. Major works included accommodation upgrading, installation of deck crane and marine conversion.

Upon delivery in end April 2006, *Federal 1* was deployed to support PetroChina International Jabung Limited's (PetroChina) operational activities in Jabung Block, Province of Jambi, Indonesia. PetroChina will be chartering *Federal 1*, which will be moored at its terminal to receive, store and offload crude oil.

In the same month, Tanker Pacific Offshore Terminals' *FSO Shanghai* was also completed after a 70-day conversion.

The vessel underwent extensive structural, piping and heating coil modifications in order to increase its storage capacity from 300,000 to 370,000 barrels. Apart from life extension, other major works included installation of a metering system, loading and offloading lines and chain stoppers for a spread mooring system.

"Tanker Pacific is pleased to have completed our third offshore conversion project with Keppel and we look forward to working together again in the future," said Tanker Pacific Offshore Terminals ED Alastair McGregor.

Kudos for *Federal 1*



# First double-hull conversion completed

**K**eppel Shipyard has successfully completed its first double-hull conversion project, the *MT. Durgandini*, for one of its regular Indonesia clients, PT Arpeni Pratama Ocean Line Tbk.

In carrying out this conversion at the Benoi yard, the 13-year old tanker had approximately 2,600 tonnes of steel added from the forward to the aft, giving it a double bottom tank. Block prefabrications were also carried out to expedite the underwater portion of the works.

In addition, extensive upgrading works had also been carried out on the cargo pumps, steering gears, ramp shafting alignment of the vessel, as well as the installation of gas detector systems in all the water ballast tanks.

After a four-month conversion, 35,705 dwt *MT. Durgandini* set sail on 17 May 2006 for her first charter as a double-hull oil tanker under a long-term time charter agreement with Pertamina, Indonesia's state oil company.

Keppel Shipyard completes its first double-hull conversion project, the *MT. Durgandini*



## A gargantuan task well done

**W**atching a mammoth rig inch out of a drydock is already quite a sight to behold, not to mention five Herculean rigs at one go!

The 'epic' drama unfolded at Keppel FELS' Admiral Dock on 29 April 2006.

Five jackup rigs were involved in the 24-hour operation. They were jackup rigs *SeaDrill 5*, *WilCraft*, PV Drilling's rig, *Deep Driller 5* and *ENSCO 108*.

Two of the rigs were undocked while the other three rigs were repositioned within the dock.

Commenting on the challenging task, Captain Lim Ewe Seng, Senior Shipwright Manager of Keppel FELS, explained, "Drydock space is premium in a shipyard. With so many projects ongoing, we have to make sure that usage of the dock is optimised so that every project can be executed in a timely manner."

The process went like clock-work but the one-day operation was the result of more than six months of careful and precise planning by the respective teams from Planning, Engineering, Production, Purchasing, Projects to Quality Assurance.

"This is the first time we are executing such a major operation in Keppel FELS," shared Captain Lim after the gruelling 24-hour exercise.

He continued, "We had to work round-the-clock in two shifts, overcome tight timetables and put our heads together for best ideas, whilst ensuring that safety is never compromised.

"Nevertheless, despite the demanding requirements and conditions, I am proud that it was successfully completed on schedule and with zero accident," said Captain Lim beaming with pride.

Five giants await their turns



# A promise delivered

Under a starry sky and illuminated by a simulation of the celestial phenomenon of the Northern Lights, the resplendent KFELS B Class jackup rig, *SeaDrill 3*, was christened.

**K**eppel FELS has delivered on its promise to SeaDrill Management (SeaDrill) ahead of time and on budget.

At the christening ceremony of *SeaDrill 3* on 21 April 2006, CB Choo said, "This is a proud moment. The many months of close partnership between the projects teams of Keppel FELS and SeaDrill has produced a quality rig. *SeaDrill 3* is a testament of Keppel's proprietary design, the KFELS B Class."

In a matter of 24 months, *SeaDrill 3* was completed despite the yard's heavy orderbook. And there was no compromise on timeliness and quality with the teams on constant vigilance throughout the project.

Like the Northern Lights that are constantly in motion because of the changing interaction between the polar wind and the earth's magnetic field, so it was with the project teams who collaborated in tune with the rigorous demands of the project.







1. KFELS B Class rig, *SeaDrill 3*, was delivered ahead of time and on budget
2. Lady Sponsor, Chantal Guys, warmly welcomed by two lovely Norwegian 'dolls'
- 3 & 4. Delighting in the fanfare of Norwegian themed cultural performances: the legendary trolls and choir from the Norwegian Seamen's Mission
5. A toast to friendship and success – (from L) Chantal Guys, Michael Chia, Hans Van Royen, CEO of SeaDrill, CB Choo and Philippe Guys
- 6, 7 & 8. Celebrating teamwork

CB Choo added, "The on-time delivery of the jackup is a showcase of the good management and execution of Keppel FELS. Its open and transparent communication and close co-operation with SeaDrill have immensely contributed to the success of the project."



Guest-of-Honour, Philippe Guys, VP of TOTAL E&P, shared the same sentiments. He said, "Competent and motivated human resources are key elements to accomplish these goals."

Chantal Guys, wife of Philippe Guys, named the rig *SeaDrill 3* under the iridescent evening sky, amid a fanfare of Norwegian themed cultural performances.

CB Choo further added, "Keppel FELS and SeaDrill share a win-win partnership. We are both committed to ensure that a high quality premium rig leaves our yard on time to work for its operator, TOTAL."

This rig is the first of four jackups that Keppel FELS is building for SeaDrill.

On the construction of other SeaDrill rigs ongoing in the yard, CB Choo

commented, "The other three SeaDrill rigs we are constructing at this yard are well underway. They are on track with their respective production schedule. When delivered, they will be of the same or better calibre as *SeaDrill 3*."

Their expected deliveries are between mid 2007 and second quarter 2008.

Upon delivery, *SeaDrill 3* headed for West Africa to assume her two-year charter agreement with TOTAL in Nigeria. It will be capable of operating in 300 feet water depth, drilling down to 30,000 feet and accommodating 110 men.

The KFELS B Class rigs have passed the test of extreme weather conditions. They withstood Mother Nature's wrath last September when Hurricane Rita swept through the Gulf of Mexico.

# In command at Keppel yards

“A bomb has been planted in Keppel Shipyard (Gul)...,” the caller said. Then the phone went dead.

With that, a ‘crisis’ had begun in Keppel Shipyard.

## 10:00 AM

At Keppel Shipyard (Gul), an evacuation of all employees within the administration building where the threat was located began. The Singapore Police Force was informed of the call and tracing of the caller was conducted promptly.

After an intensive search, the device of threat was located and ascertained. Keppel’s security force placed a bomb blanket over it to mitigate its blast should it go off before the arrival of the Singapore Armed Forces’ (SAF) Explosive Ordnance Department (EOD).

## 1:30 PM

Investigations of the morning’s event carried on past lunch when another bomb threat call was made. This time, Keppel Shipyard (Tuas) received the call. Again, Keppel’s security force responded immediately but what they ‘feared’ came to pass.

A deafening ‘blast’ rocked the grounds of Keppel Shipyard (Tuas) sending tremors across the yard. Thick smoke engulfed the operations building as it burst into flames. Again, despite the challenges, the security force acted calmly and swiftly.

The Singapore Civil Defence Force (SCDF) arrived within minutes and jumped into the thick of action, handling the situation with clockwork precision, simultaneously putting out the flames while ascertaining that there were no chemical agents released by the bomb.

When the fire was put out and all

apparent dangers removed, the SCDF started to enter the building to evacuate the remaining ‘casualties’. Due to the overwhelming number of casualties coupled with zero visibility caused by the thick smoke, the SCDF engaged the help of Keppel’s emergency response team. This was the same team that had managed to curb the fire from spreading further before the SCDF arrived.



## ISPS COMPLIANT

Fortunately, the scenarios were part of an exercise conducted by Keppel O&M security team in compliance with the International Ships & Ports Security (ISPS) regulatory requirements for world-class maritime facilities.

“While there are no current information of any specific threat against targets in Singapore, our security assessment is that the threat of terrorism in Singapore remains real and significant. This is even more so when it comes to our business operations.

“The exercise shows how our operations can be impacted in such situations and even with our most fortified planning, there will be damages,” shared Keppel O&M Senior Security Officer,

Lee Lin Gee who was also the Exercise Director.

The exercise put to test Keppel’s readiness as well as their integration with external agencies that support Keppel’s efforts during emergencies.

“Such exercises provide both parties with the opportunity to hone their skills in responding to emergency situations and familiarise with each others’ operational procedures. Keppel’s enthusiasm in organising such a large scale exercise is highly commendable and we look forward to working together again in the future,” said Lieutenant Quek Wei Liang, Rota Commander at Tuas Fire Station.

Sharing the same sentiment is Police Senior Inspector Low Kay Wee. He said,

“This exercise was a success. Keppel’s security force handled the chaotic situation well prior to the arrival of the police and SCDF. Their initiative in setting up the incident command post for all external agencies to gather important information is remarkable.”

## BCM PLAN IN PLACE

During the exercise, several key personnel role-played as severe casualties, triggering off Keppel’s Business Continuity Management (BCM) plan.

The BCM plan was developed to identify potential threats and their impact on the organisation’s operations. This in turn will help in the development of response, continuity and recovery plans to ensure that critical functions recover promptly and



“Our emergency response team members have the experience in handling emergency situations because we work and train closely with the SCDF, and exchange experiences as some of them have served in emergency response teams in other organisations,” said Rashidi Mahmud, Assistant HSE Officer at Keppel Shipyard Tuas.



Meanwhile, the police had already tracked down and arrested the caller, identifying the caller as the same culprit in the morning. Police officers at the yard assisted in crowd control and cordoned off the danger areas to prevent further injuries.

#### 4:00 PM

A total of 50 ‘casualties’ were recovered from inside the building and all personnel were accounted for. Of the 50, 46 suffered severe injuries and four ‘died’.

Close working relationships with the government agencies such as the SCDF equip Keppelites with the knowledge and skills needed in handling critical situations



increase the organisation’s resilience to unplanned disruptions in assets and personnel.

Anthony Toh, Group Security Manager of

Keppel O&M, said, “Lots of resources, time, money and manpower have been invested to ensure safety in all Keppel’s yards because we never know what will happen. Combined training and exercises

with Government agencies help us hone our own security and safety procedures when faced with compromising situations. The bomb blanket is one of these investments.



Abu Bakar, GM (Operations), Keppel Shipyard Benoi, led the discussion on recovery and business continuity procedures in Keppel’s BCM plan

“It is undeniable that even with the best preventive measures and crisis management practices, accidents and third party threats can only be minimised but never eradicated. In this industry, time is money and any downtime for us is also downtime for our customers.

“Customers today appreciate this and not only do they want to know if you have security and safety measures in place, they also want to know if you have an effective BCM plan in place. Through this exercise, Keppel O&M can now confidently state that we stand ready.”

# The Rotterdam bustle

The offshore boom is resulting in a bustle of activities in Keppel yards and Keppel Verolme in The Netherlands is one such yard that is busy with several on-going jobs. The yard is strategically located to serve customers operating in the northern hemisphere, such as the North Sea regions.

“These are exciting times. With Keppel’s shared knowledge, experience, expertise and excellent facilities, we are able to provide Keppel’s stamp of quality for all projects,” said Harold Linssen, MD of Keppel Verolme.

The Rotterdam facility is currently undertaking various jobs, comprising a mixture of newbuildings, upgradings and conversions.

## Newbuilding projects

The Sevan Stabilised Platform (SSP) *Piranema* is a round-shaped FPSO platform which arrived at Keppel Verolme for heavy lifting installation of key modules and survey works.

Owned by Sevan Production AS (Sevan), the newbuild is on an 11-year charter to Petrobras SA (Petrobras) when it is completed and will be deployed off the Coast of Brazil.

Senior delegates from Sevan and Petrobras were pleased with the progress of works onboard *Piranema*, as well as the high safety standards achieved.

Sevan congratulated Keppel Verolme in a letter of appreciation, in which it stated, “Congratulations to Keppel Verolme for successfully completing all heavy lifting operations and we are pleased to say that all operations were carried out with the highest safety standards possible. We would like to express our appreciation to all yard personnel involved.”

## Upgrading jobs

Keppel Verolme’s upgrading projects now underway include one FPSO.

Details on the upgrading of one of the semisubmersibles for Transocean and *Terra Nova FPSO* for Petro-Canada (East Coast) can be found on pages 13 and 15 respectively.

The second semisubmersible upgrading project is the *Blackford Dolphin*. An Aker H3 type semisubmersible, it will be able to drill in water depths of 2,100 metres after upgrading. Due to the immense scale of the project, steel fabrication works for this rig had to be divided among three Keppel O&M yards spread across the globe in Singapore, the United Arab Emirates and The Netherlands.

## Conversions

Owners, Société de l’Exploitation du *Audacia*, a company of the Swiss-based Allseas Group, brought bulk carrier, *Geeview* to the yard for conversion to a dynamically positioned pipelaying vessel, to be named *Audacia*.

## Repairs

Jackup rig, *GSF Labrador* and semisubmersible, *Transocean Prospect*, are at the yard for major works. While drydocked, *GSF Labrador* underwent repairs of its tooth rack and survey of its spud cans. *Transocean Prospect* underwent a full strip down, its major components were overhauled and extensive repairs and renewal were carried out.

## After a hard day’s work

Not only do Keppelites in Verolme work hard, they also take time out for more relaxed corporate activities. As a practice, the employees’ foundation organises parties in recognition of its members’ efforts. Parties were held in December last year and one recently in May 2006.

These functions provided a platform for everyone to know one another better outside of work and build camaraderie amongst colleagues.



The round-shaped FPSO *Piranema* resting inside Keppel Verolme’s mammoth drydock for commencement of its survey works and heavy lifting activities



# Pens for thoughts

Bharat K Sheth collects pens. But these are not just run-of-the-mill pens. These are pens that have inked numerous contracts clinched by Great Eastern Shipping (G.E. Shipping). On 16 June 2006, another pen was added to this collection – for the signing of the company's first newbuild jackup rig with Keppel FELS. *OffshoreMarine* spoke with Bharat, Deputy Chairman & MD after the signing ceremony.

## You had the opportunity to tour Keppel FELS yard and visit a jackup rig. Share your thoughts.

**I**n fact, my first visit on a rig was three weeks ago (in early June 2006) when G.E. Shipping and Keppel FELS commenced discussions for building a jackup rig. At that time, I visited a KFELS B Class rig. It was an important visit, as I wanted to get myself acquainted with the functionality of the various equipments and machinery on the rig.

## Why was Keppel FELS selected as the choice builder for G.E. Shipping's first rig?

Keppel FELS is a market leader in rig building. A rig is an expensive asset; being associated with the market leader was the most logical decision. To back it all, the KFELS B Class is today the most popular rig design.

## What does 'Keppel' mean to you?

Keppel is known for reliability and the promise to deliver on time. Its technical and engineering capabilities coupled with vast experience in asset building provides comfort to G.E Shipping.

## How do you see the market for rigs in India?

At present, there are about 30 jackup rigs operating in India, significance presence being that of foreign owners. We foresee enormous opportunities in the offshore space. More so, with oil prices likely to remain strong for the next few years, oil companies will increase E&P spending.

The lucrative offshore E&P market will also see a rising demand for offshore oil field services. As such, G.E. Shipping is also expanding its service offering in the offshore oil field support services sector. We currently have four platform supply vessels on order.



Bharat (right) sharing a moment with (from L) CH Tong, Michael Chia and Siddhartha Roy, CEO of Arya Offshore Services

# Keeping on track

Whether in Singapore or the Philippines, Keppel's promise to deliver quality projects on time and safely prevails.

## Milestones at Keppel Singmarine

Despite increased workload amidst tight schedules, Keppel Singmarine is on track with significant milestones for 11 newbuild vessels.

Following the early delivery of AHTS *Hadi 19*, one month ahead of schedule in December 2005, Keppel Singmarine completed sister vessel, *Hadi 20*, in March 2006, also a month ahead of contractual completion date and without a single lost time incident.

This delivery of *Hadi 20* marked yet another important milestone in Keppel Singmarine's track record of on-time, on-budget deliveries to its customers, and further reinforces the close and strong working relationship between Keppel Singmarine and Hadi H. Al-Hammam Establishment (HADI). In recognition of the achievement, Keppel Singmarine was presented a bonus of US\$10,000.



Sandra J. Watts, wife of Martin Watts, Area Director of Gulfmark Offshore Inc, officiates the keel laying ceremony of H310, the first of the latest six AHTS vessels to be built by Keppel Singmarine and Keppel Nantong Shipyard

On a separate joyous occasion, *SMIT Nicobar* was named at a ceremony on 2 June 2006. The third SMIT vessel following *SMIT Kamara* and *SMIT Komodo*, the early delivery of this 120-tonne AHTS earned the Keppel Singmarine team S\$100,000 as bonus.

Abel Dutilh, MD of SMIT Transport & Heavy Lift, said, "*SMIT Nicobar* is the third vessel contracted to Keppel Singmarine and would be deployed in Sakhalin for its first assignment. The delivery of this vessel also illustrates SMIT's emphasis on quality. We are grateful to the people who



The project teams of ENSCO, Keppel FELS and Keppel Batangas celebrate an even keel for *ENSCO 8500*





Keppel Singmarine celebrates the early delivery of *SMIT Nicobar*

have put the vessel together, with special praise to the Keppel Singmarine team.”

120-tonne AHTS *BOURBON Astyanax* was also delivered on 29 May 2006. It is the fifth of seven vessels for *BOURBON Offshore Surf* (Bourbon). In addition, *KST Sedna* for Keppel Smit Towage was delivered on 7 June 2006.

Between March and May 2006, Keppel Singmarine launched Bourbon’s 100-tonne AHT vessel, along with two tractor tugs for Keppel Smit Towage (KST) and one AHTS vessel for Zamil Operation & Maintenance Co.

Meanwhile, LUKOIL’s second order of an Ice-Class AHTS vessel laid its keel in early March 2006. Delivery of this AHTS is expected in the second quarter of 2007.

The first two of six 10,700 bhp AHTS vessels for Gulfmark Offshore Inc had their strike steel ceremonies in April and May respectively. The first vessel laid its keel shortly after in May 2006. Another two of these six vessels will be built at the Keppel Nantong Shipyard.

### Twin keels for *SeaDrill*

At Keppel FELS, a first-ever twin keel laying of two rigs for the same owner took place on 3 May 2006.

The rigs, *SeaDrill 1* and *SeaDrill 4*, are the latest to enter the Admiral Dock. The joint keel-laying milestone was arrived at approximately seven months since the first steel-cutting for the projects.

Both rigs are built to the KFELS B Class design. *SeaDrill 4* and *SeaDrill 1* are scheduled for delivery in the second and third quarter of 2007 respectively.

### ENSCO 8500 at Keppel Batangas

Good progress. Excellent quality standards. Clean safety record.

These were some of ENSCO Project Manager Ron Couet’s observations at the keel laying ceremony for the lower hull of the ultra-deepwater semisubmersible, *ENSCO 8500*, at Keppel Batangas on 24 May 2006.

Visibly pleased with the development of the massive structure, Ron was full of praise for the project teams of Keppel FELS and Keppel Batangas

Toh Ko Lin, President of Keppel Philippines Marine, affirmed Keppel Batangas’ commitment for the on-time completion of *ENSCO 8500*. Toh also lauded his team for having completed 350,000 manhours without any loss time incidents and encouraged them to work towards an accident-free delivery.



Keppel FELS Project Manager Jay Singam (right) outlines the next phase of equipment installation to *SeaDrill 1* Project Manager Paul MacCallum, while Keppel FELS Assistant Project Manager Bryan Toh and others look on



Keppel FELS Project Manager Herman Effendy (front right) and *SeaDrill 4* Project Manager John McMullen discuss the remarkable quality of work done during the tour of the keel block

# Ahead of time

**D**eliver on time, on budget. That is the promise of Keppel. Keppel FELS went beyond that promise to deliver jackup rigs *Deep Driller 2* and *Al Hail* ahead of schedule.

## Deep Driller 2

“*Deep Driller 2* is a shining example of what good communication, hard work, and excellent partnership the builder and owner project teams can achieve,” lauded Deep Drilling Invest’s Site Manager John Campbell.

Keppel FELS had completed and delivered *Deep Driller 2*, a KFELS Super B Class jackup rig, to Sinvest ASA (Sinvest) ahead of schedule on 27 April 2006.

Furthermore, *Deep Driller 2* was the first total turnkey project undertaken by Keppel FELS. This meant that Keppel’s commissioning department had to operate and commission all the rig’s drilling equipment.

Explained Keppel FELS’ Project Manager AC Lim, “Undertaking a total turnkey project is a great challenge in itself, from the initial design and development phase to its actual construction and test trials.”

*Deep Driller 2* is equipped with skid-off capabilities and boasts high capacity hook load of two million pounds for operations in high-temperature and high-pressure wells.

Challenging as it may seem, Keppel FELS delivered as John attests, “It would have been an amazing accomplishment that *Deep Driller 2* was delivered on time, much less ahead of schedule and with over two million man hours without incident.”

In appreciation, Sinvest presented Keppel FELS an early delivery bonus of US\$15,000.



Delivering on Keppel’s promise are GM (Projects) Wong Fook Seng (left) and AC Lim (right) with John Campbell (middle)

**NATIONAL DRILLING COMPANY**  
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**FAX TRANSMISSION**

To : KEPPEL FELS	Date : April 18, 2006
Attn. : Mr. C. H. Tong Managing Director	From : General Manager
Subject : Engineering, Procurement, Construction, & Supply of New Jack-up Drilling Rig Contract # 10163.	Ref. :

I refer to your fax of 22<sup>nd</sup> March 2006, with regard to the subject project.

I wish to go on record acknowledging the successful execution of this project. Particularly the dedication of the project team from the start of the tender right up to the delivery and commissioning in Abu Dhabi.


Accordingly, I would like to extend our appreciation with a token reward of UAE Dirhams 50,000 for distribution among your Al Hail project team.

Moreover, the great partnership that we have developed and the publicity that NDC has conveyed to the Industry in Keppel Fels ability to deliver a quality product on time is by far more valuable.

I have full confidence in our continued relationship with your active cooperation during the warranty period and expect that you would be one of our preferred shipyards for our future requirements.

On behalf of all in NDC and our stakeholders, our deepest appreciation to Keppel Fels.

Regards

  
Abdul Munim Sajif AlKindy



## Al Hail

18 September 2005 marked the delivery of KFELS B Class jackup rig, *Al Hail*, to the National Drilling Company of Abu Dhabi (NDC) 18 days ahead of schedule.

Recognising Keppel FELS for this remarkable feat, NDC awarded the *Al Hail*

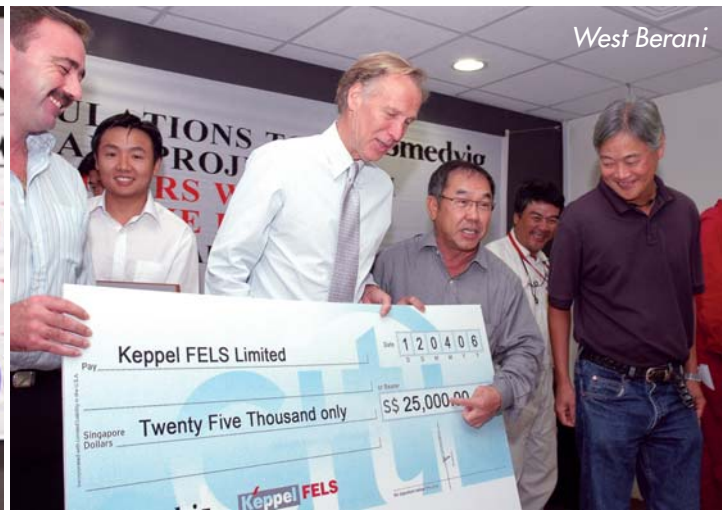
project team with a DHS\$50,000 (approximately S\$22,000) bonus.

Unlike other rigs delivered to their owners in the Singapore yard, *Al Hail* was delivered right to NDC's doorstep in the Abu Dhabi free port, a crowning achievement for Keppel considering the logistical difficulties in procuring a

suitable carrier amidst the upsurge in demand for carriers.

It was NDC's first newbuild jackup in 20 years and also their first turnkey jackup rig project with Keppel FELS. *Al Hail's* early delivery vindicated NDC's decision in choosing Keppel FELS as their designer and builder of choice.

# Scoring an ace in safety



**D**espite an unprecedented number of projects in the yard, safety remains the top priority at Keppel FELS.

Testament to Keppel FELS' commitment to safety, an impressive record of three million manhours of work without any lost time incident was collectively achieved for three projects in the month of April 2006.

They are one million manhours each for jackup rig *GULF 4*, *SSDT West Berani* and *PV Drilling's* jackup rig. The respective project owners commended their corresponding Keppel FELS project teams at the safety achievement presentation ceremonies.

Indeed, safety is another 'Can Do!' at Keppel.

Keppel FELS is committed to upholding its promise of delivering projects accident-free

# Keppel @ OTC

Themed "New Depths, New Horizons", the world's largest and foremost offshore event for the development of offshore oil and gas resources was held between 1 and 4 May 2006 at Reliant Centre in Houston, USA.



The Offshore Technology Conference (OTC) 2006 was bigger and better this year. Well attended by over 60,000 industry leaders and buyers, it was also a platform for E&P professionals to share and learn about the latest technology in the search for oil and gas to meet the world's needs.

Keppel O&M showcased its expertise in offshore rigs, shiprepair and conversions, specialised shipbuilding, and our global network which the group taps on to optimise technology and construction capacities at the Singapore Pavilion.



The Pavilion, fronted by the Association of Singapore Marine Industries (ASMI), was one of the anchor exhibitors with 2,000 square feet of exhibit space. Keppel FELS Brasil and FloaTEC also participated in OTC 2006 under the country pavilion of Brazil and on its own respectively.

The most anticipated event at the OTC would have to be the private gala reception hosted by Keppel O&M, which some termed as the 'Best OTC Reception in town' in Houston.



Showcasing the best of Keppel O&M at OTC 2006





# OTC Moments

Ties were renewed. New friendships forged. Wine and conversation flowed in equal measure as Keppelites and esteemed guests chatted the night away. *OffshoreMarine* reminisces moments at the OTC party hosted by Keppel O&M.



# West Setia breaks new ground

Combine a Spar wellhead platform with a tender assisted drilling rig and operators get a cost-effective piece of equipment for deepwater development drilling.

Two such fields that have reaped benefits from this solution are Unocal's West Seno field off East Kalimantan and Murphy Oil's Kikeh project off Sabah, Malaysia, two of the biggest deepwater projects in the Asia Pacific region.

By September 2006, semisubmersible drilling tender rig (SSDT) *West Setia* will moor alongside Murphy Oil's Kikeh Spar. It will be the "first ever project where a tender is being utilised for drilling from a Spar platform", according to Staale Roed, MD of Smedvig Asia, in a statement dated 28 February 2005.

Smedvig was acquired by SeaDrill in 2006 and has been renamed SeaDrill Asia Limited. This is the second time the company is breaking new grounds in the industry. The first was when semi-tender, *West Alliance*, was deployed alongside a TLP wellhead platform in the West Seno field in 2003.



*West Setia* (seen here alongside a platform at the Iron Duke field in Brunei) demonstrates how semi-tenders are a cost-effective solution for deepwater development drilling

Shared Aziz Merchant, GM (Engineering) of Keppel O&M and GM of DTG, and the designer of these semi-tenders, "The major difference between a TLP and Spar is its movement. Having a semi-tender alongside a Spar poses the challenge of controlling motions of two vessels at the same time in various wind, waves and current conditions."

Both *West Setia* and *West Alliance* are of Keppel's proprietary SSDT™ series, which are intended for both shallow and

deepwater drilling operations. These tender rigs host major facilities such as the living quarters, and power generators. In deepwater, these rigs work alongside dry tree units such as TLPs and Spars, significantly reducing drilling and well completion time and costs and overall capital expenditure.

*West Setia* is currently deployed by Shell Brunei at the Iron Duke Field. Upon completion, she will assume an 800-day-contract with Murphy Sabah Oil Ltd.

## Deepwater discussions

The International Energy Outlook 2005 indicates that world oil demand is expected to rise from 78 to 119 million bopd in the next 20 years, with the United States and Asia, including China and India, accounting for 64% of the growth.

It is also projected that the industry will spend over US\$100 billion on deepwater exploration and development worldwide over the next five years.

Aziz shared these insights at a

seminar titled, 'Deep and Getting Deeper – The Future of Deepwater Development'.

To meet this growing demand, Aziz emphasised the pressing need for operators to drill deeper and faster.

He also spoke about the expected increase in rig orders from the national oil companies as well as drilling contractors for operation in the Gulf of Mexico, Southeast Asia and Middle Eastern regions.

Recognising this trend, DTG is gearing itself to offer solutions for deepwater E&P.

Aziz also shared how such industry development bodes well for Singapore yards. For instance, Keppel O&M is currently pursuing orders worth over S\$10 billion and has received heightened enquiries for jackups and semis.

Held on 24 March 2006 at the National University of Singapore (NUS), the seminar was well attended by members of the offshore fraternity and academia.



# Keppel Cebu gears up for shipbuilding

**K**eppel Cebu has achieved another significant milestone as it ventures into the foreign shipbuilding market with its first newbuild OSV project.

A 45-tonne bollard pull harbour tug, Hull 015 (project number), will be deployed for operations in the foreign market upon completion.

President of Keppel Cebu, Fok Swee Yin, shared at the vessel's keel laying ceremony on 16 May 2006, "This project underscores Keppel Cebu's commitment to expand its portfolio of services, which has traditionally been shiprepair and conversion. The yard's facilities have been

upgraded and the people are well-trained to take on this new challenge."

The ceremony was well attended by colleagues and representatives from the Lloyd's Register of Shipping and the Maritime Industry Authority (MARINA).

MARINA Regional Director Glenn Cabañez lauded Keppel Cebu's involvement in the project, "The project is in accordance with the government's programme of promoting the local shipbuilding industry."

This twin-screw stern drive tugboat will be fitted with modern fire-fighting systems and nautical, navigation and

communication equipments. Based on a proven design by the Marine Technology Development (MTD), the R&D arm of Keppel Singmarine, this will be the fourth MTD 2745T tugboat to be built by Keppel's shipyards in the Philippines.

With 102 years of shipyard operations, Keppel Cebu has the proven expertise in shiprepair, conversion, ship lengthening and jumboisation as well as the capability to build barges, landing crafts and tugboats. The ISO certified shipyard has a 35,000 dwt capacity drydock, slipways, launchways and docking quay that cater to international reefer vessels and local RORO passenger ferries.



Keppel Cebu swings into action for its first newbuild OSV project, which is similar to *MV Salalah* (seen here) that was built and delivered by Keppel Batangas in March 2005

# Partnering to succeed



## Celebrating 20 years of heavy lifting ...

Put two veterans with more than 300 years of combined experience and expertise in a win-win situation and what you get out of it is guaranteed success.

Such is the long-standing partnership which Keppel and Smit Singapore have shared since the beginning of Asian Lift, followed by Keppel Smit Towage (KST) five years later. Recently, these two partnerships celebrated their 20th and 15th anniversary respectively.

Although differing in the services they provide, the formation of the two companies share several similarities. They were formed by pulling resources together and have been profitable since day one. Most notably, both have grown from strength to strength.

During his address at Asian Lift's celebration, CB Choo noted, "Looking back, it seemed like only yesterday when Captain Roy Martin, who headed Smit in Singapore then, approached Keppel to pool our resources to maximise our heavy

lift capacities. Keppel FELS owned two cranes then, *Asian Helping Hand* and *Asian Hercules*. Smit also owned two, *Smit Cyclone* and *Smit Typhoon*.

"We did that in 1985, and did well. Since then, Asian Lift has grown from strength to strength. Our fleet has grown not just in size, but in its expertise and experience as well."

Testament to CB Choo's statement is the fact that in 1997, the 3,200 tonne capacity *Asian Hercules II* joined the fleet of Asian Lift's floating cranes. The strongest heavy lift crane in Southeast Asia, she continues to play an important role serving the industry in many heavy lift activities.

Abel Dutilh, MD of Smit Transport & Heavy Lift and Smit Salvage, saw the



Celebrations ahoy with 'sailors' serving cocktails at KST's 15th Anniversary, with Ben Chew and Veerappan Vellaiappan, Asst GM (Project Management) Keppel Singmarine





... and 15 years of rugged towing



Customers and business associates join in the party

opportunities leveraging Smit's tugging experience and expertise, and Keppel's resources and global network. KST has grown in both its fleet size and its business since its formation in 1991.

From humble beginnings of only four tug boats, the fleet grew to 32 tugs in a span of 15 years and the number is still growing with six new tugs to be delivered this year. As one of the leading tugging services

company in the region, KST also boasts the youngest fleet in the market.

Its business has also expanded by leaps and bounds in countries around the region, such as Brunei, Indonesia and Malaysia, through many strategic partnerships.

Briny Marine Services was formed in Brunei in 2003, followed by KSP Towage

in Malaysia in 2005 and Kejora Resources, also in Malaysia, in 2006.

Ben Chew, GM of KST, shared, "With the ever-increasing demand for tug services in ports which are growing in the Southeast Asia region, KST will continue to expand its fleet size and extend its market reach. There are already projects in the pipeline and we are definitely looking at exciting times ahead."

# People movements

**I**nge **Oliversen** has been appointed President of Offshore & Marine ASA (O&M) in Norway with effect from 10 March 2006.

Oliversen has recently rejoined the company. He was previously with O&M in the capacity of Finance Director and subsequently, Business Development Director.

**Odd B Skjaereth**, in mutual agreement with the Board of Directors, has stepped down from his position as Managing Director of O&M. He will remain as a member of the Board of Directors.

**Wong Fook Seng** has been appointed General Manager (Projects) of Keppel FELS from 1 May 2006.

After joining Keppel in 1979 as an Asst Project Superintendent, Fook Seng has taken on various portfolios and overseas postings within Keppel O&M. His last appointment was Senior Project Manager of Keppel FELS. Fook Seng obtained his Master of Business Administration from Singapore's Nanyang Technological University in 2001.

## Changing of guards in Keppel Cebu



(From R) Fok Swee Yin, Dr. Ishmael Limkakeng, Jr., Director of Keppel Cebu and Geoff Phoon

Keppel Cebu welcomed Fok Swee Yin as its newly appointed President effective 1 April 2006 as Geoff Phoon retires from service.

"Swee Yin is not new to Keppel Cebu. He was assigned as its VP for Operations from 1991 to 1993," said Charles Foo, Chairman of Keppel Philippines Marine (KPMI).

With over 40 years of shipyard experience, Fok takes the helm of Keppel Cebu at a significant juncture in its 102 years of operation as the 23-hectare ship care facility expands its service portfolio to include shipbuilding for the foreign market.

Fok started out as an Apprentice Fitter in 1963 with Keppel Shipyard and rose through the ranks to assume more responsibilities in the shipyard operation. Prior to this second assignment to the Philippines, Fok was GM for Operations at Keppel Shipyard (Gul).

"A lot of things have changed since I was last stationed here in Cebu. Back then, the yard catered mostly to domestic inter-island vessels. Now we have foreign flag carriers coming in for repair and the shipyard is also venturing into shipbuilding," reminisced Fok.

He continued, "I still see familiar faces back when I was working here in Keppel Cebu during the early 90s. It makes me feel at home and I look forward to working with the Cebu team once more."

Charles also thanked Geoff for his contributions, "Geoff is well loved by his people as he balances his management

style with his military skills and participatory style of management."

During his term, Geoff has raised the safety awareness and work standards and practices of the yard. He has brought in valuable foreign business to Keppel Cebu.

Geoff served with the Royal Malaysian Navy for 20 years before entering the shipyard industry. Prior to his appointment as President of Keppel Cebu, Geoff was the Executive VP and GM of Keppel Batangas Shipyard (1998–2000).

"My stay here in Keppel Cebu has been very meaningful. I am blessed to be part of its history during its centennial celebration in 2004. I am honored to have worked alongside colleagues who went the extra mile to transform the shipyard to what it is today. I am confident that Keppel Cebu will grow even more as I now turn over the helm to the able hands of Swee Yin," shared Geoff.

"Geoff will be remembered as an officer and gentlemen. His work ethics and management style has endeared him to his peers. We wish him well in his future endeavors and may he now have the time to enjoy his golf passion," added Toh Ko Lin, Keppel Cebu Chairman and KPMI President.



# Solutions for deepwater

Deliver unbiased floating production solutions to the deepwater market. That is the vision of FloaTEC, LLC, the 50/50 JV between Keppel FELS and J. Ray McDermott. The company boasts an unmatched portfolio of multiple floating production systems (FPS) solutions for its clients, represented by the SemiTEC™, SparTEC® and TlpTEC™ product lines. *OffshoreMarine* introduces one of the designs in the SemiTEC™ suite of products, the DeepDraft™ Semi technology.

The SemiTEC™ suite of designs was developed for FloaTEC, LLC based on DTG's proprietary DeepDraft™ Semi technology.

The DeepDraft™ Semi is a steel catenary riser (SCR) friendly deep draft semisubmersible production platform concept that is ideally suited for wet tree applications. Its hull design was built on Keppel FELS' diverse experience with drilling semi design and has been adapted from the KFELS 8000 ring pontoon concept.

FloaTEC, LLC provided market data and important applications criteria, and worked with DTG to develop competitive design specifications that will position the DeepDraft™ Semi as the preferred solution in the growing market segment for deepwater semi production floaters.

Some of the benefits of the DeepDraft™ Semi solution are listed below.

- Both the vertical (heave) and angular (pitch and roll) motions of the SemiTEC™ semi are significantly lower than that of other deep draft semi designs because of the increased draft. This reduces the stresses in the riser at the hang-off location as well as the touch down point, making it SCR friendly.
- The scalability of the design enables it to accommodate a diverse range of payloads.

## DeepDraft™ semi features

Hull length	: 62 m
Hull breadth	: 62 m
Pontoon width	: 10 m
Pontoon depth	: 9 m
Column	: 12 m x 12 m
Topside weight	: 10,000+ mt
Operational draft	: 40 m
Air gap	: 15.5 m



DeepDraft™ Semi technology

FloaTEC, LLC's portfolio of production semisubmersible hull designs are derived from DTG's experience and extensive knowledge of the industry.

DTG's semi designs comprises both multi-purpose exploration and development drilling units as well as specialised units for production operations. Some of its designs include:

- **SSDT™** – Semisubmersible drilling tender
- **SSAU™** – Semisubmersible accommodation support unit
- **DSS™ 20** – Semisubmersible drilling rig for operations in the deepest water of the Caspian Sea in water depths of 1,000 m or 3,280 ft
- **DSS™ 38** – Semisubmersible drilling rig for the deep water of Offshore Brazil in water depths of 2,740 m or 9,000 ft
- **DSS™ 51** – Semisubmersible drilling rig designed for deep waters of Offshore Brazil, Gulf of Mexico, West Africa and South East Asia in water depths of 3,000 m or 9,843 ft
- **KFELS 8000 series** – Semisubmersible drilling rig characterised by its ring pontoon design
- **Production semi series** – KFELS 8000 and DeepDraft™ Semi production units designed for deep and ultra-deepwater wet tree applications. On top of that, Keppel FELS has proven construction and delivery experience with deepwater production semis including P-18, P-51 and the P-52.

# Flying the Keppel flag at Posidonia

**K**eppel O&M showcased its strong capabilities and technology within the Singapore Pavilion at the 20th Posidonia exhibition in Greece recently.

Lim Hwee Hua (third from right) with the Keppel team at Posidonia 2006

Held from 5 to 9 June 2006 at the Hellenikon Exhibition Centre, the group's subsidiaries, namely Keppel FELS, Keppel Shipyard and

Keppel Verolme also participated in the exhibition.

Lim Hwee Hua, Singapore's Minister of State for Finance and Transport, led the 60-strong delegation from the city state at the ribbon-cutting ceremony officiated by the Greek Minister of Mercantile Marine, Manolis Kefaloyiannis.



Stressing Posidonia's contributions to Greece's economy, Minister Kefaloyiannis said, "Greek shipping controls 16% of world tonnage, ranking first both in Europe and worldwide. This leadership allows us optimistic thoughts as regards to the future of Hellenic shipping."

More than 1,600 exhibitors from 80 countries and territories participated in Posidonia 2006, which attracted some 16,000 trade visitors. The physical scale of the exhibition grew by 15% compared to the 2004 edition, marking a new Posidonia record.

## A Nigerian visit

**K**eppel Shipyard hosted the visit of the Board of Directors of the Nigerian National Maritime Authority (NMA) led by Engr. Anthony Olufunso Williams, Chairman of the NMA Board and Dr. Ozichi Joel Alimole, Acting High Commissioner of Nigeria to Singapore on 30 May 2006.

Nelson Yeo, ED of Keppel Shipyard, Louis Chow, GM of Commercial-Conversion and other Keppel representatives, had a fruitful discussion on the role of shiprepair and shipbuilding yards in the support of the local shipping industry as well as exchanged ideas for future cooperation.

The 10-men delegation gained insights of our people, facilities and current projects as they toured the yards of Keppel Shipyard (Tuas and Benoi), Keppel FELS and Keppel Singmarine.

Established in 1987, NMA is the regulatory agency of Nigerian maritime industry to promote greater participation of Nigerian shipping companies in Nigerian sea borne trade.

During their stay in Singapore, the delegation from NMA also met up with the Maritime & Port Authority.

Nigerian delegates were given an insight into Keppel's offshore and marine businesses





# Grooming young leaders

In keeping with its efforts in talent management and succession planning, Keppel O&M has fielded its first batch of 27 young executives to a six-module leadership training programme.

Titled "Business Awareness and Personal Effectiveness", the programme aims to provide these potential future leaders with knowledge, critical skills and attitudinal improvements to help them achieve greater career and personal advancement.

To strengthen camaraderie, participants across its three operating units, Keppel FELS, Keppel Shipyard and Keppel Singmarine, were grouped together to work on projects to explore areas of business improvements for Keppel O&M.

In strong support of talent development, the Keppel O&M's Senior Management team attended the projects presentations made by the five teams on 5 April 2006.

In his opening address, CB Choo underscored Senior Management's firm belief in the importance of human capital to propel long-term growth in the group.

Since its launch on 19 July 2005, more than 102 employees have undergone the Keppel O&M – SMU Management Development Programme over the last three runs. Three different programmes are specially customised to meet the respective needs of the participants.

Keppel O&M has set aside a budget of approximately S\$8 million for the development of its human capital in 2006,



Charles Foo, MD of Keppel O&M, sharing views with young executives at the leadership training programme

of which close to S\$3 million is budgeted for Scholarships and Employee Development Scheme.

## Can weld

'Make work a passion' aptly sums up Yuji Yoshimitsu's attitude towards what he does for a living and leisure – weld.

Yuji works at the Regency Steel Japan (RSJ), a manufacturer of large steel structures. One of the company's main activities is welding, something which Yuji had been doing passionately for the past 12 years.

Besides welding at work, Yuji participates in national competitions. He shared, "I am always under extreme pressure and become very nervous during competitions, but this has not stopped me from participating. I wanted to prove to myself that I can be a champion and



A true craftsman, Yuji Yoshimitsu

that is why I took part in welding competitions for the past six years."

Yuji's hard work paid off when he came in first in the Fukuoka Prefectural welding competition at his sixth attempt.

Yuji's passion for the art of welding and "Can Do!" attitude greatly enhance his skills as a welder, contributing to the RSJ's high standard in producing quality products that customers have come to expect.

Regency Steel Japan is a JV between Keppel FELS and Mitsui Bussan Steel Trade Company.

The company is a manufacturer of large, high-quality steel structures for the international and domestic market. Some structures RSJ manufacture for the offshore and marine sector include cylindrical columns/drums, turret shaft and the shell and support for liquefied gas tanks on ships.

# Around our yards

OffshoreMarine tracks works carried out at various Keppel yards.



## Singapore

### Keppel Shipyard Tuas

Name : **MAERSK NIIGATA**  
 Owner : Nedlloyd Shipmanagement  
 Country: Netherlands  
 Type : Container Ship  
 DWT : 44,541  
 GRT : 37,902  
 Date : 15 May 2006 – Present  
 Scope : General survey and repairs

Name : **GRANDE SOLARIS**  
 Owner : Asahi Shipping Co. Ltd  
 Country: Japan  
 Type : Bulk Carrier  
 DWT : 172,694  
 GRT : 87,473  
 Date : 11 May 2006 - Present  
 Scope : General survey and repairs

Name : **PERGIWO**  
 Owner : Gblt Shipmanagement  
 Country: Singapore  
 Type : Tanker  
 DWT : 36,403  
 GRT : 23,188  
 Date : 23 May 2006 - Present  
 Scope : General survey and repairs

Name : **FPSO NGANHURRA**  
 Owner : Woodside Energy  
 Country: Australia  
 Type : Floating Production Storage and Offloading (FPSO) vessel  
 DWT : 142,000  
 GRT : 96,000  
 Date : 8 June 2006 – 2 July 2006  
 Scope : Mooring system connection winch repair

### Keppel Shipyard Benoi

Name : **CMA CGM RAVEL**  
 Owner : CMA CGM  
 Country: France  
 Type : Container Carrier  
 DWT : 79,465  
 GRT : 73,059  
 Date : 1 June 2006 – Present  
 Scope : General survey and repairs

Name : **CMA CGM BERLIOZ**  
 Owner : CMA CGM  
 Country: France  
 Type : Container Carrier  
 DWT : 80,250  
 GRT : 73,157  
 Date : 18 May 2006 – 1 June 2006  
 Scope : General repairs

Name : **Hoegh Gandria**  
 Owner : Hoegh Fleet Services  
 Country: Norway  
 Type : Liquefied Natural Gas (LNG) Carrier  
 DWT : 66,999  
 GRT : 96,011  
 Date : 31 May 2006 – Present  
 Scope : General repairs and renewal

Name : **Naga I (Ex Hakuryu III)**  
 Owner : Japan Drilling Co  
 Country: Japan  
 Type : Semisubmersible  
 DWT : N. A.  
 GRT : 13,029  
 Date : 5 June 2006 – Present  
 Scope : Repairs





Pergiwo



Naga I



EASTERN VENUS



MV ASTRO VENUS

## Philippines

### Subic Shipyard & Engineering

Name : **YM LONGEVITY**  
 Owner : Yang Ming Marine Transport Corporation  
 Country: Taiwan  
 Type : Container Ship  
 DWT : 30,700  
 GRT : 29,872  
 Date : 24 April 2006 – 30 May 2006  
 Scope : Drydocked for major repairs and renewal works including hull preservation, overhaul of auxiliary engine and numerous valves and renewal of the air cooler, deck and ballast pipes

Name : **VEGA III**  
 Owner : KC Line Co. Ltd.  
 Country: Korea  
 Type : Bulk Carrier  
 DWT : 139,650  
 GRT : 72,931  
 Date : 16 – 28 May 2006  
 Scope : Afloat steelwork repairs

### Keppel Batangas Shipyard

Name : **EASTERN VENUS**  
 Owner : Eastern Shipping Lines, Inc  
 Country: Philippines  
 Type : Cargo Carrier  
 DWT : 7,707  
 GRT : 6,182  
 Date : 10 – 29 May 2006  
 Scope : 58.2 tonnes of steelworks, piping works, hull blasting and painting, and sea valves overhauling

### Keppel Cebu Shipyard

Name : **MV ASTRO VENUS**  
 Owner : Chijin Shipping S.A.  
 Country: Japan  
 Type : Pure Car Carrier  
 DWT : 12,464  
 GRT : 29,849  
 Date : 1 – 8 May 2006

Scope : Full blasting and painting of the external hull, 12 tonnes of steel renewal, shaft seal bonding (under owner specialists), servicing of auxiliary boiler and economiser, repairing of propeller blades by MIG welding and reconditioning of anchor brake system/renewal of brake band and lining.

Name : **MV CALA PICCOLA**  
 Owner/ : London Ship Managers  
 Managers Limited  
 Country : United Kingdom  
 Type : Refrigerated Cargo Carrier  
 DWT : 6,723  
 GRT : 8,984  
 Date : 14 – 17 May 2006  
 Scope : Emergency drydocking for the removal and replacement of bow thruster assembly

## The Netherlands

### Keppel Verolme

Name : **Piranema**  
 Owner : Sevan Marine ASA  
 Country : Norway  
 Type : Sevan Stabilised Platform (SSP)  
 DWT : N. A.  
 GRT : N. A.  
 Date : 25 May 2006 – Present  
 Scope : Temporary storing, pre-assembling and installation of process skids, pressure vessels, piping and valves on the hull. Scope also involves the fabrication and installation of steel structures and hook-up of cranes and offloading station.

# Keppel Group Newsbytes

**K-REIT Asia** commenced trading on the Singapore Exchange Securities trading (SGX-ST) on 28 April 2006.

Valued at S\$630.7 million, K-REIT Asia's initial portfolio comprises four prime office buildings from Keppel Land's stable of quality commercial developments namely, Prudential Tower, Keppel Tower, GE Towers and Bugis Junction Towers.



**FELS Cranes**, a wholly-owned subsidiary of Keppel Integrated Engineering, has completed the installation and delivery of five Rubber Tyred Gantry (RTG) cranes to Kolkata Port Trust, India's oldest and only riverine port in May 2006.

FELS Cranes has an established presence in India for more than a decade.

In 2005, FELS Cranes was ranked second among 50 Fastest Growing companies in Singapore. The certification was endorsed by IE Singapore and Spring Singapore to confer recognition for outstanding



(From L) Lim Chee Onn, Executive Chairman of Keppel Corporation; J Y Pillay, Chairman of SGX-ST; Prof Tsui Kai Chong, Chairman of K-REIT Asia; Kevin Wong, MD of Keppel Land and Teo Soon Hoe, Group Finance Director of Keppel Corporation; launched K-REIT Asia to the market

achievement in continuous and sustained growth.



**Keppel Seghers** has secured a second dryer/pelletizer contract in Poland.

Awarded by Wodociagi Bialystockie, the water treatment company from the city of Bialystock in north-eastern Poland, Keppel Seghers will provide the dryer, coater, recirculation, pellet cooling and complete automation as well as the basic engineering for the whole plant.

When fully operational by mid 2007, the plant will be able to treat more than four tons of sludge a day.



**Keppel Telecommunications & Transportation's** (KT&T) subsidiary, Keppel Telecoms had on 30 May 2006 and 31 May 2006, acquired from the open market 490,000 and 1,234,000 additional shares in MobileOne, at an aggregate consideration of \$1,005,999.40 (at S\$2.05306 per share) and \$2,498,504.48 (at S\$2.02472 per share) respectively. MobileOne is an associated company of KT&T.



FELS Cranes has an established presence in India for more than a decade



# Global Reach

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# Fourth jackup rig from India



Inking the contract for the fourth KFELS B Class jackup from India were (seated from l) P.R. Naware, President – Corporate of G.E. Shipping; Bharat K Sheth, Deputy Chairman & MD of G.E. Shipping; CH Tong; Michael Chia, ED of Keppel FELS; (standing from l) Dr Foo Kok Seng, GM of Offshore Technology Development; Wong Kok Seng, Senior GM (Group Procurement) of Keppel O&M; K.M. Sheth; Ravi K Sheth, ED of G.E. Shipping and S Jayakumar, GM (Marketing) of Keppel FELS

**K**eppel FELS has secured its fourth order from India for a KFELS B Class jackup rig. This rig is for the Great Eastern Shipping Co. Ltd. Group (G.E. Shipping).

This will be G.E. Shipping's first newbuild drilling rig and is scheduled for delivery by the fourth quarter of 2009.

It will be further customised to meet G.E. Shipping's operational requirements for water depths of up to 350 feet and readily upgradeable to 400 feet. The rig will have capabilities to drill in 30,000 feet water depth and can accommodate 112 men.

Said K.M. Sheth, Executive Chairman of G.E. Shipping, "The E&P sector is developing rapidly. We want to be able to meet this growth, both in the Indian market as well as globally. With its excellent track record in the design,

engineering and construction of jackup rigs, we are very happy to sign this contract with Keppel FELS.

"We are confident that the KFELS B Class, a field-proven design, will meet our drilling requirements in serving the offshore oil and gas industry."

Said CH Tong, "Keppel FELS is glad to partner G.E. Shipping in pursuing its growth plans in the E&P arena. There are vast opportunities in India. With our proven design, engineering and construction expertise, Keppel is well poised to provide solutions for this growing market.

"The growing number of rig orders for our KFELS B Class design demonstrates its strength as the rig of choice for trend-setting oil companies and drilling contractors."

According to India's national oil company, ONGC, it aims to double E&P reserves to six billion tonnes by 2020, out of which four billion tonnes are from deep waters.

G.E. Shipping is also a regular customer of Keppel Shipyard, which has undertaken repair of tankers, bulk carriers and Liquefied Petroleum Gas carriers for the company since 2002.

G.E. Shipping is listed on The Stock Exchange, Mumbai, India; National Stock Exchange, Mumbai, India (INR); and Luxembourg Stock Exchange, where their Global Depository Receipts (GDR) is listed.

**See also page 25 on the interview with G.E. Shipping's Bharat K Sheth.**