A rousing evening of revelry and celebration marked the successful marine hull conversion completion of the Petrobras P-54 FPSO in December 2005. Jurong Shipyard had been working in close partnership with Petrobras since 1997 when it first converted the P-37 FPSO. This was followed by P-38 FPSO conversion, P-40 FPU conversion, P-43 FPSO conversion, P-50 FPSO conversion and currently the P-54 FPSO conversion.

The bonds of friendship, which were painstakingly built up over the years, had resulted in the forging of a stronger commitment. That evening, key officials from Brazil, including the Brazilian Ambassador to Singapore, Mr. João Gualberto Marques-Porto joined senior officials from Petrobras and Jurong Shipyard to celebrate. Praising Jurong Shipyard for its high standards of quality and commitment to safety, Petrobras' Director, Mr. Renato Duque acknowledged the great achievements in jointly managing and executing the project. He added that achieving 5 million manhours without loss-time was an achievement and testimony to the yard’s commitment to safety, environmental and health issues.

THE WAY AHEAD ...

Ship conversion: Completion of World’s Largest FPSO

Sembawang Shipyard and SMOE recorded a milestone achievement in offshore conversion with the successful completion of the world’s largest floating production-storage-offloading (FPSO) vessel, Erha FPSO for Saipem S.A. The sail-away ceremony was held in Sembawang Shipyard in September 2005.

The Erha FPSO project team also achieved Sembawang Shipyard’s best safety record for FPSO projects, with more than 10 million man-hours worked without any loss-time injury. The contract called for the fabrication, integration, pre-commissioning and commissioning assistance of 11 modules of FPSO topside facilities weighing 44,500 metric tonnes and the integration of 15 modules fabricated by others in Nigeria and Malaysia. The total integrated weight was approximately 50,000 metric tonnes and the flare structure towers at 115 meters high. Designed for the separation of oil, gas and water, Erha FPSO had a storage capacity of 2.2 million barrels of oil and accommodation space for up to 100 personnel.

The vessel hull, which was constructed in Korea, measured 285 meters in length, 63 meters in width and 33 meters in depth.

The Erha FPSO would begin operations in the first half of 2006 at the Erha Field in offshore Nigeria. The unit would be operated by Esso Exploration and Production Nigeria Limited, an affiliate of ExxonMobil Corporation.
The LNG K Freesia from the KSS Line would be remembered as the first LNG carrier to be repaired outside South Korea. From this milestone achievement, Sembawang Shipyard scored further successes by repairing a total of 10 LNG carriers during the year—the highest number of LNG carriers to be repaired in one year. These significant accomplishments would pave the way for Singapore and the SembCorp Marine Group to be a major global player in the niche LNG sector, ready to take on an increasing number of LNG projects in the future.

### LNG Repairs: First LNG Repair Outside South Korea

The LNG K Freesia from the KSS Line would be remembered as the first LNG carrier to be repaired outside South Korea. From this milestone achievement, Sembawang Shipyard scored further successes by repairing a total of 10 LNG carriers during the year—the highest number of LNG carriers to be repaired in one year. These significant accomplishments would pave the way for Singapore and the SembCorp Marine Group to be a major global player in the niche LNG sector, ready to take on an increasing number of LNG projects in the future.

### Successful Brazil-Singapore Collaboration in P-50

In November 2005, Maua Jurong in Brazil witnessed the milestone naming of Petrobras P-50 FPSO platform, a project that involved the SembCorp Marine Group’s integrated yard capabilities in Singapore and Brazil.

### Engineering Breakthrough in Singapore’s Shipbuilding

July 2005 would go down in Singapore’s history of shipbuilding as an engineering feat from a home-grown team. That month, Wan Hai 311 was christened at Jurong Shipyard by Lady Sponsor Madam Cai Jingying, wife of Mr Hu Hanxiang, President of the Association for Shipping across the Straits.

Wan Hai 311 was the first of six 2,646 TEU container vessels to be constructed for Wan Hai Lines based on a design developed in-house by Jurong Shipyard’s engineering team. Measuring 231m x 32.2m x 16.5m, the container vessel was built with a high service speed of 23 knots and a high homogeneous container intake of more than 1960 TEU at 14 tonnes per TEU. It had the ability to load two tiers of high-cube containers in hold and accommodate up to 2,646 TEU, including 1,688 TEU on deck and 958 TEU in hold. Additional features included a lashing bridge and an increase in container carrying capacity.
The Way Ahead...

Chevron-Jurong Shipyard Alliance

To bring the Chevron-Jurong Shipyard alliance into the next phase of progress, key personnel from Chevron Shipping and Jurong Shipyard came together to map out plans for future growths. The two-day alliance meeting held on 26 to 27 July enabled key members from both companies to share insights on strategies for continuous improvement and capacity expansion as the yard progressed into the niche area of LNG and LPG repairs.

Launch of “Ahead Of Its Time”
Chevron Shipping – Jurong Shipyard Alliance Commemorative Book

A Fruitful Alliance Captured in Print

To celebrate more than 15 years of close alliance, Chevron Shipping and Jurong Shipyard jointly launched a commemorative coffee table book entitled ‘Ahead of Its Times’ in September 2005. Established in 1989, based on common objectives and a shared commitment towards continuous excellence, the alliance had since set the benchmark for the local marine industry. Honouring all who contributed to the success of the partnership, the book captured the pioneering spirit from both companies in daring to create an exclusive long-term contract that was unheard of 15 years ago. Both companies reaffirmed the vision and the close partnership continually and hoped to build upon its present success by improving quality, safety and environmental standards over the long-term.
institutions via a comprehensive technology roadmap across key rig components design, analysis and enhancements. The most recent of this is the Joint Maritime Port Authority – TRI R&D Programme between the Authority, the Institute of High Performance Computing and PPL Shipyard to provide design analysis and improvement projects toward new generation jack-up systems.

PPL Shipyard’s research and development thrust is geared towards the evolution of the next-generation rig. Working closely with rig operators, classification societies and major clients, the Baker Rig has always been at the forefront of delivering high specifications rigs to meet a diverse range of operational requirements. PPL Shipyard is also committed to driving and funding many research and development projects in collaboration with local research institutions.

PPL Shipyard has an impressive track record in the development of proprietary jack-up rigs via a wholly owned subsidiary, Baker Marine based in Houston, Texas. Serving as the in-house design centre of excellence with a track record of having designed 57 rigs now operating worldwide, Baker has always incorporated leading edge evolutions in its rig designs. From the BMC Big foot to the High Specification BMC375 Pacific Class jack-up rig, Baker has an impressive portfolio of proven jack-up designs in operation in many of today’s fields. The flagship jack-up rig, the BMC375 Pacific Class, has had 13 units secured so far.

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PPL Shipyard’s rigs are unique in that it is a completely in-house developed proprietary product, not adapted from other older designs. The design of this rig incorporates efficient construction methodology interfaced for optimum construction methodology from the start. This enables PPL Shipyard to be configured as an efficient “manufacturing plant” to generate rigs with consistency across all construction processes and quality, enabling unparalleled efficiency in the use of limited land area. Many facilities in the shipyard have also been customised to cater to the rig-construction process generating time and cost savings. This approach is replicated across the other shipyards in the Group to deliver optimal construction output.