

Singapore Marine Industry's Performance in 2015

OVERVIEW

Total Turnover

2015 was indeed a challenging year for the Singapore offshore & marine industry as it slipped into a cyclical downturn as a result of the continual plunge in oil prices to below US\$30 per barrel by year end amid slow economic growth in emerging markets. Global economic slowdown and political uncertainties especially in the Middle East added to the crisis and contributed to the prolonged low oil prices.

Low oil prices have led to significant reduction in Exploration & Production (E&P) capital expenditure resulting in cut-backs in drilling activities and falling demand for drilling rigs. The offshore & marine and oil & gas industries worldwide are facing strong headwinds as global oil production continued unabated despite falling oil prices. The entire E&P value chain has been affected by the volatility of oil prices and there have been projects deferment and cancellation of rig orders. Singapore as a leading builder of drilling rigs was not spared from the depressed business environment in the upstream sector.

This is the fourth downturn for the offshore and marine industry in Singapore since it ventured into the offshore market in the early seventies. The present down cycle is expected to be more protracted compared to the earlier ones. The impact of the current downturn on industry members both globally and locally, is severe, and there have been retrenchments, consolidations, mergers and acquisitions as well as negative growth and losses for some.

Despite the difficult market environment worldwide, Singapore offshore & marine industry managed a respectable performance. The industry achieved a total turnover of S\$14.73 billion in 2015 on the back of successful deliveries of projects from earlier contracts as well as higher revenue recognition from the completed offshore rig projects. As expected, the total turnover in 2015 was 14.5% lower than the record turnover of S\$17.23 billion achieved a year ago.

The offshore and rigbuilding sector generated S\$9.57 billion in 2015, accounting for 65% of the total industry turnover. This sector has been the largest contributor to the industry's total turnover since 2008.

The ship repair and conversion sector brought in S\$4.86 billion or 33% of the industry's turnover. The shipbuilding sector contributed S\$0.29 billion, making up 2% of the total turnover.

Order Books

Despite the global economic slowdown and uncertain market environment in 2015, Singapore shipyards secured some S\$4.9 billion in new orders during the year. These contracts demonstrated that there were still industry players willing and able to invest and build up capabilities and capacities for the longer term. Nonetheless, the current order books reflected a significant slowdown in new orders, diving 49% when compared to the S\$9.7 billion in new orders booked in 2014.

Majority of the new orders secured in 2015 were for non-drilling solutions. Among these new contracts are the world's first conversion of a large roll-on/roll-off cargo vessel to operate on a dual-fuel diesel LNG propulsion system, the conversion of the third Moss-type LNG carrier into a Floating Liquefaction (FLNG) vessel, conversions of tankers to Floating Production, Storage and Offloading (FPSO) vessels, Floating Storage Unit (FSU) and Floating Storage and Offloading (FSO) vessel. Other orders placed in 2015 include the construction of the world's largest new semi-submersible crane vessel as well as construction of a new FSO vessel, a high specification liftboat, an ice-class multi-purpose vessel and a multi-task anchor handling tugs.

As at end 2015, the industry has a total order book standing at some S\$19 billion, with deliveries stretching to 2020. This was a decline of 20.6% from the total order book of S\$23.93 billion at end 2014. The total order books included the backlog of orders clinched from earlier years and these projects have completion dates and delivery schedules stretching into 2020. Apart from these orders, there is also a consistent flow of repair, upgrade and modification work flowing into the Singapore shipyards from regular and repeat customers.

Docking Capacity

Docking facilities and capacity in Singapore stood at 17 dry docks in 2015, two fewer than in 2014. These dry docks have capacities ranging from 5,000 to 500,000 deadweight tonnes. The total docking capacity in 2015 was 4,552,500 deadweight tonnes. This was 400,000 deadweight tonnes lower than the capacity of 4,952,500 dwt in 2014.

There are a total 16 floating docks and ship lifts in Singapore in 2015, up from 15 in 2014. Their lifting capacities ranged from 2,050 to 40,000 tonnes. The total lifting capacity of these floating docks and ship lifts was 248,950

tonnes in 2015. This was 12,000 tonnes higher than the total capacity of 236,950 tonnes in the previous year.

Total Employment

The local offshore and marine industry employed a total workforce of 95,500 in 2015. This was a decrease of 10.4% or 11,100 workers fewer compared to the total employment of 106,600 workers in the previous year. The constraint on foreign worker intake from tightening of work permit quota, fewer new contracts clinched due to low oil prices and economic slowdown, and natural workforce attrition, contributed to the drop in total employment in the industry in 2015.

The twin challenges of intense international competition and internal manpower constraint, have compelled many industry players to step up efforts to leverage on the use of technologies for productivity gains. They have embarked on mechanisation and automation as well as information and communications technology (ICT)-based projects to improve work processes, optimise production and reduce reliance on manual labour.

The industry is supported by a pool of trained personnel at all levels of the production hierarchy from the rank-and-file to senior management. The trained and skilled workforce are its most important resource, and critical in enhancing its competitive edge. Industry players continue to invest in training and reskilling programmes to ensure a technically sound and skills relevant workforce.

Workplace Safety & Health

Workplace Safety and Health (WSH) is a key core value in the local offshore and marine industry. Over the last two decades, there has been significant attention paid to building a strong safety culture with visible leadership and zero tolerance for incidents in the industry. The aim is to ensure that the shipyards and marine companies operating in Singapore as well as ship owners and ship crew are mindful that WSH is an integral part of the business.

The number of workplace accidents in the industry declined to 390 in 2015. This represented a fall of 22.3% or 112 cases fewer than the 502 workplace accidents recorded in 2014. There were four workplace fatalities in the industry in 2015, same as in the year before. However, the workplace fatality rate rose from 3.8 per 100,000 employees in 2014 to 4.2 per 100,000 employees in 2015. This continues the uptrend in workplace fatality rate from its record low of 2.7 per 100,000 employees in 2013.

The Accident Severity Rate (ASR) increased to 137 man-days lost per million man-hours worked in 2015. This was a slight increase of 1.5% when compared to the ASR of 135 in 2014. The industry's achieved an Accident Frequency Rate (AFR) of 1.4 accidents per million man-hours worked in 2015. This was a decline of 12.5% from the AFR of 1.6 in 2014.

SECTORAL PERFORMANCE

Ship Repair & Conversion

The ship repair and conversion sector performed creditably well in 2015 to record a turnover of \$4,860 million, accounting for 33% of the total industry's turnover. However, this was a decrease of 11.8% year-on-year or S\$650 million less than the S\$5,510 million achieved in 2014. The sector's contribution to the industry's turnover rose by 1%, up from 32% in 2014. Ship repair revenue as well as the average revenue per vessel has declined over the years in the face of strong competition from lower cost shipyards.

Port statistics from the Maritime and Port Authority of Singapore (MPA) recorded a total of 4,141 vessels calling in Singapore for ship repair works during the year in review. This was a significant decrease in the number of vessels that called here for repairs compared to the 6,335 vessel calls in 2014. The reduction of 2,194 vessels in 2015 represented a drop of 34.6%.

The decline in the number of vessels calls for repairs could be attributed to the weak shipping industry. The shipping industry is hit by the slowdown in global economy, weak trade demand, excess shipping capacity and depressed freight rates.

Despite the drop in the number of vessel calls, the total gross tonnage of the vessels that called for repair increased marginally to 40,898 million grt. This was 651 million grt or 1.6% higher than the total gross tonnage of 40,247 million grt in 2014. Larger vessels are calling at Singapore for repairs with the addition of bigger VLCC-sized docks.

Singapore shipyards have signed fleet agreements and alliance contracts with long term customers. Such alliance partnerships and repeat customers provided a steady stream of ship repair, upgrading and refurbishment projects for the shipyards. They accounted for majority of the workload in the major shipyards.

Singapore is fast building up its reputation as a specialist ship repair centre undertaking repair, maintenance and vessel upgrades in specialised segments such as Liquefied Natural Gas (LNG) & Liquefied Petroleum Gas (LPG) carriers and passenger cruise ships. Singapore through Sembcorp Marine set the record for the highest number of 34 LNG repair and upgrade projects in a single shipyard for the fourth consecutive year in 2015. The year in review also witnessed a high number of passenger cruise ships being refurbished in Singapore.

Two FPSO conversion projects were completed in Singapore in 2015 - *Prof John Evans Atta Mills* and *Turritella*, the world's deepest FPSO vessel. FPSOs *Modec Venture II* and *Ningaloo Vision* as well as FSO *Erawan 1* also called in Singapore for major repairs and upgrading.

Shipbuilding

The shipbuilding sector contributed S\$295 million to the industry's total turnover in 2015. This was S\$225 million or 43.3% lower than the turnover of S\$520 million earned in 2014. Shipbuilding activities accounted for 2% of the industry's turnover in 2015, a reduction from 3% in 2014.

Recovery from most of the shipping sector has remained slow, weighed down by low freight rates and over capacity. Fewer ships were built in 2015, 12 less than in the previous year. 86 vessels were launched during the year with total gross tonnage of 286,490 grt. This was 7.1% higher or 18,929 grt more than the total gross tonnage of 267,561 grt for the 98 vessels launched in 2014.

Majority of the vessels launched were offshore support and supply vessels, followed by workboats, anchor handling tugs, barges, high speed crafts, crew boats, and safety and rescue vessels.

Offshore Rigbuilding

The offshore rigbuilding sector generated a turnover of S\$9,574 million in 2015. It remains the largest contributor to the industry's total turnover. There was a decline of S\$1,626 million or 14.5% from the turnover of S\$11,200 million generated in 2014. It maintained its share of 65% to the industry's turnover.

In 2015, the industry delivered a total of nine newbuild jackup rigs and three semi-submersible rigs including the world's largest jackup rig *Maersk Integrator* and *PV Drilling VI*, the 100th jackup rig built by Keppel FELS since 1970.

The nine rigs completed were *Arabdrill 70*, *Ensco 110*, *Hakuryu 12*, *Impetus*, *Kukulkan*, *Maersk Integrator*, *PV Drilling VI*, *UMW Naga 8* and *Yunuen*. These jackups delivered were built according to proprietary designs such as KFELS B Class and Pacific Class 400. The three semi-submersibles completed were two accommodation semis *Floatel Endurance* and *Safe Boreas*, and one well-intervention semi *Q5000*.

INDUSTRY OUTLOOK

The offshore and marine market remains challenging. Moving into 2016, there were projects deferment and cancellation as oil companies seek to conserve cash to ride out the downturn. The continuing mismatch between a global supply glut and sluggish demand in a fragile world economy is expected to keep oil prices subdued in the near future.

The current storm that hits the offshore and marine business is no stranger to the industry in Singapore, which has weathered similar storms in the past. This is the fourth down cycle in the last five decades. With each cycle, we have learnt valuable lessons, improved ourselves and emerged stronger than before.

The long term fundamentals of the industry remain strong. Industry analysts believe that the current low oil prices are not sustainable in the long run as oil and gas remain the key energy source. The reduced level of drilling activities will result in a fall in supply and depletion of oil reserves while increased urbanisation and a growing middle class population globally will continue to stimulate global demand for energy. Oil companies will at some point, have to replenish their reserves.

Hence, oil prices will eventually have to reach a new equilibrium, although no one can predict with certainty when that recovery will be. Nonetheless, companies should brace themselves for a longer downturn by staying prudent and ensuring that overheads are under control, as well as by rightsizing their operations to stay optimal.

Despite the low oil price environment, countries with the long-term goal of energy self-sufficiency are looking at ways to optimise their operations while maintaining their E&P programmes. In the Middle East, new demand for rigs can potentially come from Iran with the progressive lifting of sanctions against them. The opening up of the Iranian market can provide opportunities for repair and maintenance of her ageing platforms and drilling rigs for new fields.

The scrapping and stacking of older and under-performing rigs in the downturn should contribute to long term replacement demand. When the market improves, drilling contractors will want to order new rigs that are more

efficient and can fetch higher day rates. With low oil price market and current over supply of rigs, many rig owners are repairing and upgrading their existing fleets rather than ordering new ones. The low price environment has encouraged field operators to improve rig maintenance and repair of drilling and production platforms to ensure longer and more productive lifespans.

There is still demand in the non-oil drilling market for solutions such as accommodation platforms, liftboats, offshore wind products and specialised vessels. There are also opportunities in the offshore wind and gas-related markets.

In shipbuilding, there is potential demand for liftboats to carry out offshore maintenance and upgrading works in view of the large number of ageing offshore platforms. According to HIS Petrodata, there are over 8,000 fixed platforms worldwide aged 25 years and above in water depth of less than 400 feet.

The ship repair market outlook is subdued with the outlook for merchant shipping market remaining languid. Recovery from most of the shipping sectors has remained slow, hence ship owners are sticking to essential repair works.

The local offshore & marine industry needs to diversify and tap into new markets for growth. The global trend towards green shipping presents significant potential for the industry. LNG is widely recognised as the alternative marine fuel for shipping and its use is on the rise due to emission reduction requirements set by the International Maritime Organisation. The shipping industry's demand for cleaner fuels and greener solutions opens up new opportunities in the emerging LNG market.

Major industry players are gearing up and building capabilities to seize opportunities in the growing gas market. Singapore shipyards are developing technologies and solutions that cater to the LNG value chain. These include liquefaction, re-gasification, storage, transportation, bunkering and floating terminals as well as FLNG conversion, specialised repair and servicing of LNG carriers, development of proprietary designs for LNG carriers, barges and tugs for delivering LNG efficiently to end markets. The move to provide LNG bunkering services in the Port of Singapore in 2017 will increase opportunities for servicing of LNG carriers.

The current market lull period provides both space and impetus for companies to invest in R&D to diversify and expand our suite of products and services, to enhance existing solutions, to improve operational efficiency as well as to develop new capabilities to increase our competitive edge. Diversification is important and companies will need to develop other product segments within the offshore & marine and oil & gas value chains to take advantage of similar skill sets and technologies already in place.

To maintain its market leader position, Singapore and its shipyards including those in the supply chain will have to continuously invest in R&D and technologies to offer more options and solutions to meet customers' needs as well as to create better value for their customers. We need to look at areas that we can continue to improve to enhance our core competencies and build up new strengths to prepare ourselves for the upturn. Technology and innovations are the key differentiating factors in the face of intense competition from overseas.

Last but not least, we will continue to anchor Singapore's position as the trusted and preferred solutions partners in the global offshore & marine industry.