

High oil prices and strong demand from oil companies have led to a boom in the conversion of tankers into floating production storage and offloading vessels. But there are risks to consider. **By Martyn Wingrove**

Converting risk into profit

The phase-out of single-hulled tankers due to IMO Marpol rules has given companies a good supply of conversion candidates for all sizes of oil and gas projects. There are however many risks involved in the conversion of tankers, such as very large crude carriers (VLCCs), into highly lucrative alternative uses. But with the right package of risk management and insurance, the non-technical challenges can be overcome with relative ease

A flexible solution...

“With declining reserves, oil and gas companies are increasing their upstream exploration and production activities in an attempt to increase supply at a time when the demand for hydrocarbons continues to rise year on year,” says Martin St Pierre, Managing Director of the Marine division at Jardine Lloyd Thompson. “In particular the high oil price has encouraged the development of offshore deepwater fields, and known pockets of oil and gas in smaller, shallow water sites. These new field projects have spurred a growth in the demand for floating production, storage and offloading (FPSO) units and floating storage and offloading (FSO) units.

Several shipping companies are pushing into this area, going up the value chain, often by way of conversion projects on

‘donor’ single-hull tankers. Shipyards cannot build these vessels quickly enough so it makes sense to source a tanker and convert it.”

High prices mean oil companies have vast capital budgets, although the best field development opportunities are not on the continental shelves, but in the more remote deeper waters. The largest oil companies – such as BP, ExxonMobil, Shell, Total and Chevron – have so far mostly developed their deepwater fields with newbuild ships from South Korean yards. The smaller companies do not necessarily have the same resources so they have chosen to lease FPSOs (converted from tankers) from specialised contractors.

The flexibility of leased vessels and the lower capital project costs that are achieved by deferring net present value into the operating phase means the oil majors are considering using FPSO and FSO contractors instead of owning the vessels themselves.

According to St Pierre, shipping companies can see the value of their VLCCs climb dramatically from around \$30 million up to \$100 million for FSOs and more than \$200 million for FPSOs, while the largest production ships deployed in deepwater fields can be valued at more than \$600 million.

One of the greatest challenges in the conversion of VLCCs into these high-value FPSOs is securing the correct package to



cover all eventualities, especially when contracts can be complex and limits test insurance market capacity.

“Many of the shipyards will have their own building risk programme and with JH143 survey warranties underwriters have pushed yards into putting in place better risk management. However, in the majority of FSO/FPSO conversions we encourage the project principal to arrange the insurance programme,” says St Pierre.

...still requires the right cover

Jardine Lloyd Thompson has been active in this market providing cover, as an arranger, to project principals. This cover includes voyage to the yard, port risk when the vessel is at the yard, construction risks during the conversion and the FPSO’s voyage to the field. Policies will run during hook-up and commissioning on the FPSO up to the point of first oil or gas production.

“Challenges insurance-wise come in the form of scope and sufficient limits of coverage, together with marketing knowledge required to successfully blend the capacity available from marine and energy insurers,” says St Pierre. “There are the normal risks associated with ship conversions, particularly fire risk from extensive hot works, plus additional considerations such as the provision of owner-furnished equipment and significant



Oil production at sea

exposure to the involvement of sub-contractors. After leaving the yard and once on site, there has to be close consideration of the contractual agreements relating to hook-up, installation and commissioning. There has to be contract certainty on what is covered and by whom. This is particularly sensitive when it comes to subsea equipment and works."

Fred Doll, Managing Director with Doll Shipping Consultancy, also points to the risks outside the control of the ship owner or shipyard. "There are risks on the oil project side. There are risks from oil markets, politics and technical risks as projects are in more challenging environments," he says.

There are risks at the yard that are more to do with the schedule, than technical issues, continues Doll: "There could be a delay in getting the ship into the yard or delays to component deliveries from suppliers. FPSO conversions are extremely complex." He believes yards will be called on to install mooring systems, including internal turrets on some projects, separation equipment, gas handling modules, power generators and offloading equipment.

Some FPSOs have gas compressors for reinjection or gas lift activities, others have separate condensate process streams and vapour recovery systems. All these components need to be supplied from specialised subcontractors and any delays in the long lead items could mean a budget or schedule can overrun, which could lead to loss of hire revenues for the ship owner.

This is why it is essential to ensure that the scope of cover is wide enough to go beyond the vessel areas, to include subcontractor premises and all the subsea exposures, for example, says St Pierre. "In order to secure enough underwriting capacity for the largest risks at competitive terms it is necessary to have prior experience in placing these contracts and detailed knowledge of the global marketplace. Underwriting varies significantly in the marine and the energy markets. We would typically place our clients' contracts in the London and Norwegian markets, as well as other European and Asian based markets writing this type of business." **RS**

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CONVERTING VLCCs TO VLOCs

Owners of single-hulled VLCCs are considering the conversion of their tankers into giant ore carriers to capitalise on the high day rates in the dry bulk freight markets.

Conversion of VLCCs into very large ore carriers (VLOCs) is a relatively new area for shipyards so the risks are far higher than for conventional shipbuilding. "The bulk market is driven by worldwide GDP growth and Chinese demand.

Capesize bulk freight rates are at staggering levels and yards cannot deliver newbuilds until 2010 or 2011. These VLOCs, capable of carrying one million tonnes of iron ore per annum will add capacity to the market and reduce transportation costs on Brazil-to-China shipments," says Martin St Pierre, Managing Director of

the Marine division at Jardine Lloyd Thompson.

"With single hulls being phased out, owners are opting to convert VLCCs into VLOCs," he continues. "This involves major modifications and is driving owners to securing a blend of hull and builders' risks policies, similar to VLCC conversions into FPSOs."

VLCC conversions into VLOCs involve the centre tanks being converted into cargo holds for ore (fitting double-bottoms throughout), strengthening of bulkheads, removal of piping and the addition of hatch coaming and hatch covers on the upper deck.

The ships need to handle the loads and stresses from the bulk freight, which will need to be tightly packed to prevent mass movement during voyage. The tanks

will need to be self-trimming and all hatches will have to be strengthened, according to both St Pierre and Doll. Conversions, which could take between 10 and 12 months, will need to be heavily supervised by class societies and owners superintendents.

The insurance challenges are high because of the complex nature of the conversion works contracts, the relatively new design concept and uncertainty concerning performance in post-conversion sea trials.

Insurance coverage for VLCC conversions into VLOCs can be structured on a similar basis to the FPSO conversion sector, with a whole package supplied to the project principal, who is likely to be the ship owner.