

More growth potential in semi-sub rigs

Long-term growth anticipated as oil companies develop deepwater reserves

By **DONALD URQUHART**

[SINGAPORE] Deepwater semi-submersible oil and gas rigs have a higher long-term growth potential than the shallower water jack-up rigs which are increasingly reaching their operational limits, according to analysts.

With record new building orders for offshore rigs from 2005, first jack-up rigs and then increasingly semi-submersibles, future rig order books will increasingly be filled with orders for the deep and ultra-deep water rigs.

“So far this cycle, demand in absolute terms for jack-ups has significantly outstripped that for semis, but with jack-ups reaching operational limits at water depths of about 400 feet, demand for ultra-deep semis could ultimately prove a higher long-term growth market,” says a recent Cazenove research report.

Brazil’s state-owned oil company Petrobras, for instance, is now looking to develop huge new deep-

water reserves in both offshore Brazil and the US, with the aim of increasing production of petroleum and liquefied natural gas (LNG) an average 9.1 per cent by 2010.

This includes plans to spend US\$18 billion over the next decade to develop substantial reserves at the Santos basin, near Sao Paulo.

Currently, there are 55 jack-up rigs and 21 semi-submersible rigs under construction/on order around the world. Of these, Keppel Corporation is building 51 per cent of the jack-ups and 24 per cent of the semis while Singapore’s second largest shipyard group, SembCorp Marine, is building 20 per cent and 19 per cent respectively.

A consortium of Keppel FELS and Technip recently completed the complex, and relatively rare, mating of a 25,000-tonne topside module and 4,500 tonne spider deck with its Singapore-built 17,500 tonne hull structure for the P-52 semi being built for Petrobras at its Keppel’s BrasFELS Yard in Brazil.

The more than 24-hour process saw the hull anchored and submerged to a depth of 40 metres in the Jacuenganga Channel near

the BrasFELS yard. The topside deckbox was then positioned between the hull columns via the barge upon which it was built, with only a clearance of 1.5 metres between it and the hull columns.

Next, the spider deck sections were brought into place on barges and connected to the deckbox which involved a process of ballasting the hull to lower it before deballasting to raise the spider deck sections off their respective barges.

The P-52 rig is an 81,000 tonne (displacement) semi-submersible oil-processing platform capable of processing 180,000 barrels of oil per day as well as compressing 9.3 million cubic metres of LNG per day.

The rig is comprised largely of the hull, which remains partially submerged when it is operating in the oilfield, the deck box, processing modules, modules for energy generation, gas compression, accommodation and utilities and the helideck and recreational facilities.

Production is expected to start in early 2007 in the Campos Basin region off the Brazilian coast in 1,800 metres of water.



Step 1: Towing the lower hull in preparation for its mating with the P-52 rig deck



Step 2: Submerging the lower hull until only the upper ends of its four columns are above water



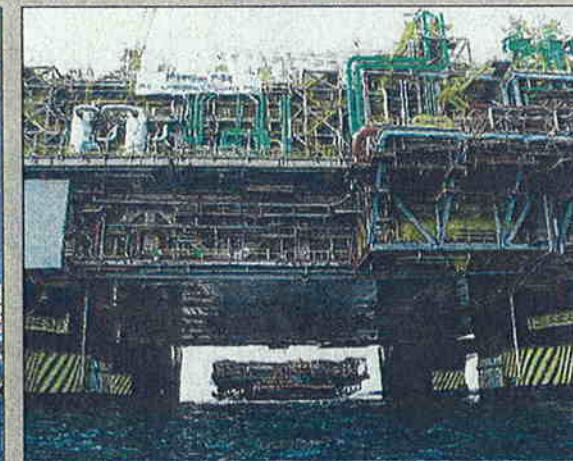
Step 3: Towing the P-52 deck box for mating with the submerged lower hull



Step 4: Positioning the deck box above the submerged lower hull



Step 5: Mating of the deck box with the lower hull successfully completed



Step 6: The spiderdeck being moved into its place beneath the deck box