OFFSHORE EUROPE 2003
OIL & GAS EXHIBITION & CONFERENCE

The big blue

Deeper and deeper depths was the message from the crane industry at the bi-annual Offshore Europe exhibition held in Aberdeen in early September.

SOME 26,000 oil and gas professionals descended on the UK's oil industry capital city to view the offerings from around 1600 exhibitors, large and small, at the Aberdeen exhibition centre.

Two main trends were readily identifiable from the marine crane industry companies exhibiting at the event. Firstly, petroleum companies will increasingly be developing offshore oil and gas production facilities using a floating surface component connected to seafloor wells and other facilities. Indeed, according to one source, some 200 such FPSOs are likely to be installed between now and 2009.

Admittedly, the bulk of these will be off Brazil and in West African waters, but the oil and gas fields to the west off the UK are also being developed, albeit at a slower rate than initial planning may have suggested. The point to note is that the water depths where these facilities will be installed are far greater than those previously encountered, and oil companies are looking to be able to carry out lift/lower operations at depths of 2000 and even 3000 metres.

This will require larger, stronger cranes with advanced control systems that can accurately and efficiently place loads where required. Ropes too will have to be developed to meet the stringent requirements imposed by operating at these depths.

It is here that the show's major talking point where cranes are concerned once again rears its head – active heave compensation. At the 2001 event, the discussion centred on using active heave systems on cranes for ship-to-platform loading operations. This has now moved to the deeps, with one argument being that active heave will be essential for installing sub-sea equipment at one extreme, and at the other, the shear length of rope in the water, added to by the dynamic effects of currents on these ropes, will make such systems ineffective. It appears the jury is still out.

Also evident is the increasing volume of renovation and replacement of cranes on existing surface facilities in the North Sea. Liebherr and Kenz, two leading marine crane manufacturers, both reported that they are experiencing a steady growth in this type of work. To this they ascribed to two reasons. Firstly, petroleum reservoir engineering has markedly improved, extending the working life of production facilities beyond that originally designed, thus requiring them and their associated equipment to be upgraded. Secondly, changing patterns of ownership of individual facilities are leading to economic drivers entering the equation through smaller owners seeking to maximise the return on their investments.

A new crane manufacturer may be entering the marine sector in UK and Norwegian waters in the shape of Nautilus Cranes, a well-established Texas-based manufacturer which has been producing cranes for oil applications in the Gulf of Mexico for many years. Two years ago, it was acquired by the Oil States group, and is now in the process of obtaining CE approval for its products. It told Cranes & Access that it expects this process to be completed in around nine months. Initially, it plans to target the Caspian oil fields but did not rule out selling its products into the North Sea.

There were also numerous winch and hoist manufacturers present at the show offering new and improved models, such as J D Neuhas's Profi TI air hoist, with lift capacities from 3 tonnes to 16 tonnes, Grumsens Maschinfabrik's manriding winch, and Kley's new annular winch designed for working at great depths using synthetic rope rather than steel wire.

Ropes themselves have been receiving attention to allow work at greater depths. Bridon Ropes, for instance, has developed a steel wire/plastic core to reduce wire degradation and said that it is also examining a wire/plastic outer element as well. ScanRope is another working on wires, but in this case it is developing a new synthetic rope winding that mimics that for steel wire.

While only a small part of the offshore industry, the lifting sector is sure to see some major developments over the next few years to meet the industry's requirement for load handling at ever deeper depths. C&a

Eagle eye

NATIONAL OILWELL had one of the crane highlights on show in the form of its HAWK Optimum web-based service designed to allow access in a useful form to the data generating by the increasingly complex and powerful control systems on today's cranes.

It allows the generation of extremely detailed tailored engineering reports concerning crane operations, as well as a broad selection of standard reports on the platform and back in the office.

The primary goal is to provide optimise maintenance operations as well as a form of condition monitoring. Parts will only need replaced once they have actually reached their designed limit on running hours, and replacement may even be postponed if original design limits prove inappropriate for the specific application.

This is where the benefits will be applied by National Oilwell itself. It will be able to tailor the design of new cranes by examining the historical data concerning similar applications and then learning design lessons from that. More than just a spy in the cab. ■