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SECTOR FORECASTS

Pipelay market constrained by vessel shortages?



Burgeoning commodity prices coupled with unprecedented demand for oil and gas have combined to produce a pipelayers dream scenario, but have the sheer number and complexity of some projects started to impact on the companies ability to cope with them all at once? Dr **Roger Knight** (left) and **Ojus Palathingal** of Infield Systems (Booth 2559) investigate in today's exclusive sector forecast.

Through to 2012 the global pipeline market shows a continued sustainability of steady growth outside the shallow water Gulf of Mexico. Capital expenditure on offshore pipelines (including major transportation and infrastructure networks) is forecast to average \$24 billion per annum from 2008 to 2012, with a combined total of approximately 74,180km forecast to be laid.

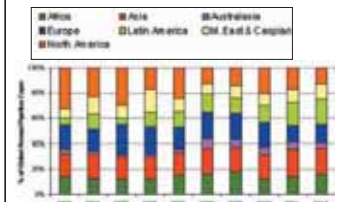
One of the key drivers of the offshore pipeline industry at the moment is the drive into deep water. In recent years the Mardi Gras scheme in the Gulf of Mexico and long trunklines like those associated with the development of the Orman Lange field in northwest Europe have opened up large conduits that future developments can tie-in to. The next five years will see 17,509km of pipeline laid in deeper waters, compared with 9507km over the previous five year period. An analysis of global deepwater project numbers and lengths over the two five-year periods shows a 26% increase in the number of forecast projects, but yet a comparative increase of 56% in length.

This imbalance is reflective of an overall increase in subsea activity and changing patterns of field configuration, indicative of an increase in subsea satellite fields projects with the use of multiple manifolds and templates. In many deepwater projects, flow assurance issues will have to be solved before a viable production scheme can be initiated.

Having powered deepwater activity over the past five years the Atlantic Margin is expected to continue as the dominant element of market activity. However, when looking at overall activity levels and the particular aspects relating to vessel utilisation, the growth in project numbers and pipe lengths to be laid in other regions is significant. The increasing activity in eastern Europe and Asia, for instance, is likely to have a major material impact, while further substantial installations are forecast in the Mediterranean Sea, Arabian Sea/Indian Ocean and Pacific Rim.

In recent months our view of the ability of available pipelay vessels to lay all the prospective pipelines has also changed. Our investigations show that this is a very subjective topic and views change whether one is talking to those who install the pipelines or to the operators.

Our view has been based on the technical capability of the vessel fleet in



Global pipeline capital expenditure by region 2003-2012.

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SECTOR FORECASTS

terms of lay rates. Our view of the market is that as the number of projects and prospects has grown, the contracting community has responded by planning and building additional deepwater capability and capacity to take advantage of this growth.

However, our research suggests that there may be some areas of concern within the market dynamics that may lead to supply, and ultimately pricing and scheduling issues.

The 2008/2009 period is expected to put an increasing demand on construction and pipelay vessels in the lower size range, whilst 2007 and 2009 are likely to put pressure on vessels within the larger capability range.

The key aspect of this imbalance is that the rate of additions to the deepwater lay fleet are less than the rate of increase expected in activity. Whilst increases in utilisation and flexibility will account for some of the 'gap' in supply and demand we expect this increasing tightness to be reflected in increased costs. In blunt terms those who do not secure vessels early may find themselves subject to increased costs through higher day-rates and significant mobilisation and demobilisation costs, or through inflexibility in vessel scheduling that may delay onstream dates. Our expectation is that outside of the Atlantic Margin those projects requiring one of the 20 or so specialist vessels will be paying a significant premium.

In terms of the overall lengths of line to be laid the annual level is within the range of historic levels and at first glance is technically feasible within the capacity of the existing fleet of pipelay vessels. This technical level of capacity is open to much debate, and will have a significant impact on the future of pipelay activity. The lay rate is one which seems to be highly subjective. In addition, the number of projects and increasing geographic spread creates a different set of issues, particularly with regard to vessel movements and mobilisation/demobilisation times.

Since 2003 the demand for energy has increased with the massive construction and industrialisation in China and India continuing apace.

The seemingly insatiable demand for energy from Asia combined with political uncertainties within important oil producing regions in the Middle East, West Africa and Latin America have led to record high oil prices which have brought energy policies into sharper focus in nearly every nation.

As a consequence of this the need to secure alternative energy supplies through gas transportation lines and export lines fed by LNG terminals have become essential items to every country's long term energy plans, and while in some countries LNG imports and gas pipeline imports can exist side by side in others there are now just too many large schemes announced from North Africa to Europe, Russia to Europe, Russia to Japan and the many various possibilities

| Global pipeline capex | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| Africa | 14% | 13% | 12% | 12% | 15% | 16% | 18% | 12% | 14% | 16% |
| Asia | 18% | 20% | 18% | 18% | 18% | 20% | 19% | 19% | 22% | 21% |
| Australasia | 4% | 2% | 1% | 2% | 3% | 7% | 5% | 5% | 5% | 3% |
| Europe | 19% | 16% | 23% | 22% | 17% | 22% | 21% | 19% | 13% | 15% |
| Latin America | 5% | 13% | 5% | 11% | 12% | 14% | 12% | 14% | 18% | 20% |
| M. East & Caspian | 8% | 13% | 10% | 18% | 10% | 8% | 10% | 9% | 10% | 12% |
| North America | 32% | 23% | 29% | 17% | 24% | 13% | 14% | 21% | 17% | 13% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

within the Asian pipeline network, that it seems unlikely that will all gain sufficient backing or access to the requisite installation capability they require for all of them to be installed within the next five years. In fact with the growing importance of the LNG trade, some may become redundant and be cancelled completely.

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