

Sigma Offshore secures US patent for innovative Smart Mooring System

Solution for oil and gas production vessels targeted for Gulf of Mexico, West Africa and Asia

Sigma Offshore Ltd, which has invested more than 4 million to date developing a pioneering mooring and fluid transfer system for oil and gas production vessels, has secured a US patent for its innovation as a prelude to a major push for international growth.

Aberdeen-based Sigma Offshore developed its Smart Mooring System (SMS) as a cost-efficient and timesaving solution for FPSOs (Floating Production Storage and Offloading vessels) and other vessels which require both mooring and fluid loading and unloading in medium to deep water depths.

The company expects to secure Canadian, European and Chinese patents for its offshore vessel mooring and riser inboarding system in the next three months, while patents in other targeted areas, such as India, are likely to be secured by the end of the year.

The bow-mounted turret of SMS allows unlimited weathervaning. SMS can be installed during a conversion of a tanker to an FPSO or FSO without the need to dry-dock the ship and without interfering with any work being undertaken on process equipment.

The company believes the system, which largely uses proven technology in a more efficient way, could save clients up to 30% on installed cost. Earlier this year Sigma received 4m (\$6m) of further investment from global oil and gas services company National Oilwell Varco (NOV), Scottish Enterprises Scottish Venture Fund (SVF) and venture capital firm, Energy Ventures.

Alistair Dornan, President and Chief Executive Officer of Sigma Offshore, said: The patent demonstrates the uniqueness of our SMS.

Securing patents is a painstaking but essential process. It is a step that has to be taken to protect our business and its intellectual property. We're delivering a cost-efficient product in a high-cost sector and it's that technology that singles us out from our competitors.

We can move forward with confidence as we look to bring SMS to the market, safe in the knowledge that we have the legal protection in place.

Sigma Offshore is looking to win business in the North Sea, the Gulf of Mexico, South America, West Africa,

North Africa and South-East Asia including Australian waters and predicts more than 140 jobs could be created should the business hit its targets.

Although developed for FPSOs, the SMS is suitable for a variety of marine applications including floating storage, floating LNG (liquefied natural gas) and CNG (compressed natural gas).

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A bespoke SMS can cost from 10m (US\$15.3m) to 30m (US\$46m) or more depending on the complexity and location of the project, while competitive mooring systems can cost 25m (\$38.1m) to 50m (\$76.3m).

Sigma Offshores Chief Technology

Officer, David Galbraith, who led the patent process for the company, said: The patent is testimony to the years of hard work by the Sigma team which has included in-house research, development backed up by extensive wave-tank testing undertaken for us by the Danish Hydraulic Institute and liaison with DNV in Oslo as part of the successful approval process.

Sigma Offshore an independent provider of turrets, moorings and marine related engineering services opened offices in Houston and Norway at the end of last year.

In March, the company highlighted its innovation to the Australian and South-East Asian market at the Australasian Oil and Gas Conference and Exhibition in Perth.

As well as its mooring and riser solutions, Sigma Offshore delivers extended well testing systems, floating production export system solutions, subsea architecture design, deepwater subsea solutions, consultancy services and project management.

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