

# Approval for DP In Ice Research Project

The final piece of a CAD8.5 million research project to improve DP operations in ice fell into place on 23 May 2012 when the Government of Canada announced a contribution of CAD3.2 million to the project from the Atlantic Innovation Fund, administered by the Atlantic Canada Opportunities Agency

Led by long-time Kongsberg Maritime simulator customer CMS – the Centre for Marine Simulation (Fisheries and Marine Institute of Memorial University) – the five-year research project aims to improve the safety and efficiency of oil and gas operations in ice environments by improving dynamic positioning (DP) system technologies for operations in ice.

Central to the collaboration is the National Research Council of Canada's Ocean, Coastal and River Engineering facilities in St. John's, Newfoundland. Principal study investigator, Dr Jim Millan, is well-known internationally for his team's work with DP and hull-ice interaction, both of which have paved the way ahead for the current project.

As resource exploration continues to grow in northern latitudes, increasing demand will be placed on technology to ensure safety and efficiency of operations. Operations in the Arctic present unique challenges in terms of the remoteness of the area, the vast distances, the scarcity and cost of support logistics and the risk to the environment. The possibility to extend offshore drilling and production seasons in ice-infested waters is therefore of significant interest to the oil and gas industry.

Kongsberg Maritime will be the commercialisation partner in the project. In addition to providing DP equipment, engineering services and a financial contribution to the research team, KONGSBERG remains optimistic the research findings will ultimately result in the development and commercialisation of a specialised DP system module specifically for ice operations that can be provided as an option to the company's current and future generations of DP technology.

Simulation testing is central to the research, whereby new algorithms developed as a result of discoveries from ice tank testing will be first tested in the Kongsberg Maritime DP simulator. Simulation testing will also play a key role in assessing the limiting weather criteria for safe DP operations in ice and the development of new recommended guidelines for the same. A full suite of new CMS 'DP-in-Ice' simulation training courses are also expected to flow from the project.

CMS is a Nautical Institute-certified DP training site currently equipped with the latest Kongsberg Maritime DP simulator technology (based on KONGSBERG K-Pos DP systems) and managed by highly experienced DP instructional staff. Of particular interest to the Centre is the ability to better analyse vessel capability and the limitations associated with positioning in ice-infested environments.