

Title: DP Ice Model Test of Arctic Drillship

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Abstract

The paper presents the results from a series of ice model tests performed in order to evaluate the station keeping performance of Stena DrillMAX ICE under varying ice drift conditions. The main purpose of the tests was to identify the capability of the DP system to respond to ice loading events that are to be expected to occur in real life.

The model tests were performed in the ice model basin at HSV A using a vessel model with scale 1/36 fully equipped with 6 azimuth thrusters. The DP system was modified differently from normal open water DP operations in order to cope with the highly varying ice drift loads acting on the vessel. Instrumentation in the ice model basin provided accurate position and heading measurement to the DP system. Ice sheets were prepared in order to reproduce the results from ice management by ice breakers as closely as possible.

The paper focuses on the thrust utilization and associated station keeping performance and associated as a function of varying ice drift loads.

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