Introduction of a Korea national R&D project related with floating-type offshore structure in the Arctic Ocean

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Abstract

This paper introduces the development of hull form of year-round floating-type offshore structure based on the Arctic Ocean in ARC7 condition with dynamic positioning and mooring system.

The research project has been being supported by the ministry of trade, industry and energy, Korea from March 2016 to Dec. 2020. KRISO and 6 institutes (SHI, PNU, KMOU, DEU, ITC, KR) participate in this project.

The main contents consist of 1) Met-ocean data collection and analysis, 2) hull form design of offshore structure, 3) ice load prediction and measurement, 4) dynamic positioning and mooring analysis, 5) model test on dynamic positioning and mooring system, 6) model test of ice/wave/structure/mooring interaction, and 7) approval in principle(AIP) in model test and analysis procedure on the station keeping in ice covered condition.

Keywords: *Floating-type offshore structure, Arctic environment, ice load, dynamic positioning, mooring system, station keeping*

Biography

Educational Background

1977 Graduated from Inha University (Naval Architecture)
1982 Master D. from Inha University (Ship Hydrodynamic)
1991 Ph.D from Inha University (Ship Hydrodynamic)

Professional Experience

1977 – 1978 Daesun Shipbuilding Company, Engineer
1978 – 1979 Hyundaeyangheang Ltd., Engineer
2007 – 2012 Wingship Technology Corp, Vice President
1983 – present Korea Research Institute of Ships and Ocean Engineering, Principal Researcher