

# **Industry Seminar: Sea-Ice & Operational Conditions for Ships on the NSR**

Day: 30<sup>th</sup> of May, 2016  
Location: DNV GL Korea, Haeundae I-Park, Busan, South-Korea  
Time: 10:00 - 16:00

## **Seminar Program**

Presentations will be given by:  
Bjørn Gunnarsson (CHNL of Nord University)  
Sergey Balmasov (CHNL's NSR Information Office of Nord University)  
Håvard Nyseth (Arctic Operations & Technology of DNV GL)  
Aleksandar-Sasa Milakovic (Department of Marine Technology of NTNU)

### **Section I**

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| 10:00-10:10 | Welcome (10 min)   |
| 10:10-10:30 | Arctic 2030 Project: Feasibility and Reliability of Shipping on the Northern Sea Route and Modeling of an Arctic Marine Transportation & Logistics System (20 min; Bjørn Gunnarsson) |
| 10:30-11:00 | Navigation in Arctic Sea-Ice and the Polar Code's new Safety Requirements (30 min; Håvard Nyseth)  |
| 11:00-11:20 | Methods of Evaluating Arctic Sea-Ice Distribution and Thickness for Arctic Shipping (20 min; Aleksandar-Sasa Milakovic)  |
| 11:20-11:40 | Ice Management and Ice-Load Monitoring in the Arctic (20 min; Håvard Nyseth)   |
| 11:40-12:00 | Questions & Answers (20 min)   |
| 12:00-13:10 | Lunch (70 min)   |

## Section II

- 13:10-13:30 Russian Ice-Breaking, Ice-Pilotage and Hydro-Meteorological Services on the NSR (20 min; Bjørn Gunnarsson)
- 13:30-14:00 Dynamic Changes in Sea Ice Cover and Thickness on the NSR for the Period 2008-2016 (30 min; Sergey Balmasov)
- 14:00-14:10 Sea Ice Characteristics and Russia's Admittance Criteria for Ships to Enter the NSR Water Area (10 min; Bjørn Gunnarsson)
- 14:10-14:30 Sea Ice Characteristics and Operational Conditions for Ships Working in the Western Zone of the NSR: Eastern Barents Sea, Pechora Sea, and Kara Sea (20 min; Sergey Balmasov)
- 14:30-14:50 Coffee/Tea Break (20 min)
- 14:50-15:10 Sea Ice Characteristics and Operational Conditions for Ships Working in the Eastern Zone of the NSR: Laptev Sea, East Siberian Sea, and Chukchi Sea (20 min; Sergey Balmasov)
- 15:10-15:30 Evaluation of Long-Term Sea Ice Forecasts on the NSR (20 min; Bjørn Gunnarsson)
- 15:30-15:50 Questions & Answers (20 min)
- 15:50-16:00 Concluding Remarks (10 min)