

6th Harsh Weather Summit – Summary

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By

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The 6th Harsh Weather Summit was held in The Hague, Holland on May 22-23, with a focus on Arctic Operations, its challenges and state of the art technology. The status or results of various Joint Industry Projects were presented. These created a solid benchmark to enhance future exploration and development in environmentally sound ways.

Some 75 people attended from various backgrounds and countries. Presenters covered arctic themes from the North East and North West passages, arctic developments in Yamal, Greenland, Beaufort and Chukchi Seas and Sakhalin, as well as more southern ice covered areas such as the Caspian. Updates were presented on Rules and Regulations including the new Barents 2020, IMO Polar Code and ISO Arctic Structures Code.

A number of students were invited through industry sponsorship from TU Delft, Maritime Innovation Programme (MIP) and NHL, participating in panel discussions and providing summaries of all topical speeches. A number of booths were filled representing the Government of Canada and that of Kazakhstan, by Trade Commissions, as well as a number of businesses including Canatec, Huisman, Marin, Oceanic, and Wagenborg.

Key topical speeches were provided by the Canadian S&T Trade Commissioner Mrs. Rana Pudifin speaking about Canada's Arctic challenges, Mr. Anuar Akhmetov speaking about Kazakhstan's business opportunities, Mrs Greta Akopova representing Vniigaz/Gazprom speaking on the environmental knowledge requirements for Yamal, and Prof. Hacquebord of the Arctic Centre in Groningen speaking on climate developments. A number of strategic papers included Hans Christian Olsen from Nunoil speaking about Greenland opportunities and Dr. Axel Meisen of the Alberta Innovates Technology Future speaking on the Global North project 2050.

Technical papers included a novel FPSO mooring concept for arctic waters presented by Bluewater and a new shallow water icebreaker by Wagenborg.

The Summit closed with a panel discussion on arctic challenges and the attendees discussed collaboration in social economic, environmental as well as technical areas, to enhance safety and operational efficiencies and to make best use of available knowledge and experience. Marin and Oceanic launched a new proposal for the initiation of an Engineering Network with the objective to exchange knowledge, to work together and to organize future Joint Industry Projects or JIPs.

The Summit organized by Energywise can be called a success although small in size. The number of arctic conferences has indeed mushroomed in the last few years, indicating an interest from oil and gas, mining, emergency escape and rescue, oil spill containments and many design and operational themes. The Dutch Industry launched one such JIP with the aim to prepare an Arctic Operating Handbook and to define JIPs for further work, when required.

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With additions from Albert B. Aalbers, Maritime innovation Programme

Such a Handbook does not presently exist, although several Regulators have been planning similar initiatives. One of them is by the ISO Arctic Structures 19906.

This 6th HWS was therefore very timely, it provided useful input for the Dutch Operating Handbook JIP, it provided links between various areas of expertise, and prepared the road for more collaboration and JIP's in areas of safe operations and environmentally sound ways for future explorations and development. The 7th HWS is planned for the spring 2013 in Kazakhstan.

Key highlights of papers are summarized below.

- The needs and priorities were presented for the development of the Canadian Arctic.
- The footprint, impact of possible oil spills and emissions and the need for an elaborate environmental monitoring were presented for Yamal development.
- The role and impact on design and operations of the Ice Management was regarded to be in "its infancy" still. More developments shall be expected.
- An overview of winterization and class requirements was presented, with restrictions for pollutants against the outer shell, the new and mandatory Polar Code perhaps in 2013, and the needs for arctic navigators.
- Different operations may lead to differing risks and the ranking of such risks.
- Environmental Impact Statements or not limited to oil and gas related operations anymore but also include all operations such as surveying.
- Recent strategic papers can be a good resource, including the National Energy Board for Arctic Drilling Review 2011 and the Arctic Marine Shipping Assessment 2009.
- In regard to spills, safety and emissions, the leading industry specialist stated we have all the right knowledge to carry out exploration. But not yet for exploitation.
- A novel dis-connectable mooring system for station keeping of an FPSO is based on existing technology components, but has special features to be able to disconnect under ice load.
- Ice management in shallow waters, with e.g. grounded ridges, can be achieved with a new thruster and hull selection, in astern milling mode. The method is suitable for remote and sensitive areas and is applied in the Caspian Sea.
- The ISO 19906 enhancements are ongoing, including technical and operational aspects. JIPs are seen as the best way to develop the technology base for such enhancement.
- New examples were provided of remote sensing technologies and especially that of improving the data preparation, the transmittal and the end uses on board the ships. Improving communications reliability is on-going.
- People should use performance based standards for Escape, Evacuation and Rescue. Training and safety drills are to be part of that.
- Arctic Operations require a new concept of medical treatment on board the ships in remote areas, supported by an international network of medical experts. Use of on-line support with real-time observation when medical treatments are carried out.
- The Northern Sea Route is expected to generate increasing interest, but poses some requirements.
- In most arctic areas there is a strong political will to create a stronger and more diversified economy (allowing future developments in harsh areas).
- The North holds many opportunities and will likely become increasingly important. Technology and Governance are the key factors. In Canada's provinces Alberta and Newfoundland technology roadmaps have been developed.