Popular webinars about icebreaking continue



Aker Arctic's popular webinars continue to gather professionals with an interest in icebreaking and shipping in ice. Here is a review of the latest topics. Let us know if you find one that you missed but would have been keen to attend. An updated list of upcoming webinars can be found on our website:

https://akerarctic.fi/en/news-category/webinar/

Propulsion and ice load monitoring

Operations in ice and harsh environments place challenging demands on a vessel's propulsion system and hull structure. Building on our experience in icebreaker and Arctic ship design, as well as decades of full-scale trials and measurements, Kari Laukia, Head of Equipment Business, and Rob Hindley, Head of Machinery & Structures, brought their expertise to bear on delivering complete propulsion packages and hull stress monitoring systems.

Aker Arctic's role in the development of Arctic projects (in Russian)

Regional Manager Alexey Dudal and Development Manager Alexey Shtrek presented projects related to the Arctic and the Northern Sea Route where Aker Arctic has assisted clients to successfully develop new vessel concepts and transportation solutions, in addition to harbour ice management. Also, the new regulations on the Northern Sea Route were discussed.



Icebreaking for lakes and ports Case: Detachable icebreaking bow

Sales Manager Jukka Salminen and Development Engineer Teemu Heinonen discussed essential aspects to consider when beginning to plan new icebreakers for lakes and ports. Successful past concepts were presented, with the focus on how innovative solutions have increased cost efficiency and flexibility.



Acquisition of Polar Research Vessels – the early phase is crucial

Sales Manager Arto Uuskallio has been part of many Polar Research Vessel projects. His experience is that every research vessel is, in fact, a one-of-a-kind prototype, regulated by government acquisition laws and with long timelines between projects. Therefore, the procurement and design processes are more complex than in commercial vessel projects. In particular, the effects of early phase decisions are felt throughout the entire project.

In this webinar, he shared his expertise and recommendations on how to achieve a successful Polar Research Vessel project.



19

Ship operations in ice and practical winterisation

Jukka Salminen presented how ships operate in ice, both independently and with icebreaker assistance. Different design solutions for efficient ice operations were discussed. Salminen also described how icebreaking operations and ship handling in ice can be trained using an ice navigation simulator.

Rob Hindley presented practical methods and approaches for winterising ships. The target being to have a ship that is safe and functional in low temperatures and icy conditions.



The Polar Code and ice strengthening

Rob Hindley looked back at what both regulators and the industry have learned from the years since the Polar Code came into force on 1 January 2017. The goal-based nature of the Code brings opportunities for designers, builders and shipowners, but also requires closer cooperation and an understanding of the overall approach to safety and operational risk in polar environments.

Structural Engineer Ville Valtonen discussed the factors that affect the selection of the most suitable ice strengthening level for a vessel, both from a class notation perspective and the need for additional strengthening beyond the minimum ice class requirements. By selecting the correct ice strengthening level, steel weight can be minimised, while safety is ensured.

Powering of ice classed ships

Ships of any ice class bring additional costs, but there are ways to optimise this. Managing Director Reko-Antti Suojanen explained the requirements of the Finnish-Swedish Ice Class Rules concerning vessel powering, the motivation behind the rules and why they are important for the ice classes 1C, 1B, 1A and 1A Super. Power requirements and installed power can be reduced with the right design selections, and special ice model tests provide the appropriate results for a class approval. Savings can be made in investments and through lower fuel consumption.

Ilkka Saisto, Head of Ship Performance, explained different technical solutions for an ice going vessel's power requirements. What are the advantages and disadvantages of different propulsion concepts when a vessel is operating in open water, in light ice or in heavy ice conditions? Powering design aspects can be different when a vessel is assisted in icy waters or when it is travelling independently. There are also additional measures to improve ice performance.

NEWS IN BRIEF

Aker Arctic joins renewable energy team

The world is moving towards cleaner energy in big steps. As projects become more demanding, the need for broader expertise arises. The recently established Team Renewable Arctic Finland brings together all relevant stakeholders, investors, businesses, technology and service providers with governmental institutions for creating renewable maritime energy solutions for a sustainable future.

Aker Arctic, along with 21 Finnish companies, has joined the team to offer competitive offshore expertise to innovate, create, design and deliver scalable solutions for renewable energy. Together, these companies with a multitude of references respond on their part to the global shift towards carbon neutrality and low carbon solutions.

Customers can now access all innovative players in Finland at one point of contact, while reducing environmental impact throughout the value chain.

https://teamrenewablearctic.fi

