Aker Arctic and Deltamarin combine excellence in Arctic tanker design

Aker Arctic Technology Inc and Deltamarin Ltd have jointly developed a modern Aframax-sized tanker concept for arctic use, focusing on safe operations. Deltamarin’s expertise in affordable energy efficient cargo vessels together with Aker Arctic’s strong track record in arctic vessels have turned into a unique tanker concept. Apart from being ice strengthened and equipped with other novelty features, the vessel will provide cost efficient and reliable tanker operations both in open water and in ice.

The Arctic Aframax tanker is intended for crude oil and oil product transports. The vessel is strengthened to ice class PC5 level (equals approximately Russian Maritime Register of Shipping category ARC6) and is capable of continuously breaking thicker than one metre level ice. She can operate on the Northern Sea Route during the extended summer months, and with assistance even longer. During the winter months the vessel can operate in other sub-arctic sea areas such as the Baltic Sea or Sakhalin. Deltamarin’s experience in designing cost efficient cargo vessels with track record of hundreds of contracted vessels is utilised in minimising the newbuilding and operating costs of this special tanker.

Aker Arctic’s Project Manager Riku Kiili and Deltamarin’s Director of Ship Design Markku Miinala are excited about the co-operation, which brings together the top knowhow of both companies. “The design integrates optimised ice breaking and open water performance as well as the latest energy efficiency features applied together with the Polar Code requirements. This unique combination results in an affordable building and improved transport economy by cost efficient operation. The design can be fine-tuned according to the customer’s wishes”, describe Kiili and Miinala.

The bow and hull shape of the vessel have the best balance of open water performance with icebreaking capabilities. The specially designed hull strengthening improves safety in operations in the arctic waters. The hull is equipped with an Ice Load Monitoring System, which measures ice loads from the hull and provides online support to the officers ensuring safe operations. The system will also help the ship owner in the long term by analysing the data and creating information for the optimal operations. The emphasis has also been on winterisation for cold climates in all aspects of the concept design.

The vessel is equipped with two CP-propellers and shaft lines directly coupled with slow speed diesel engines. The vessel can also be fitted to run on LNG with dual fuel engines. Further there is a possibility for two bow thrusters and shaft PTO/PTI (Power Take Off / Power Take In) systems. A special focus has been on developing an improved command bridge, where the new Aker Arctic ARC Bridge Concept was used. The visibility from the bridge is excellent in all directions and good ergonomics including access and passages to command posts is created.

Technical specifications

Arctic Aframax 118,000 DWT Crude Oil Carrier

Main Dimensions:

Loa: 266.0 m
Lbp: 258.1 m
Breadth 46.0 m
Depth 22.5 m
Draught design 14.8 m

Hull and Performance:

Ice class: PC5/RMRS Arc6 level
Ice breaking capability: 1 metre continuous
Economical open water speed: 13.5 knots

For further information please contact:

Aker Arctic Technology
Mr Reko-Antti Suojanen Managing Director
Tel. +358 10 323 6300

Deltamarin
Mr Markku Miinala, Director, Ship Design
Mobile: +358 40 8321 402
Email: markku.miinala@deltamarin.com

About Aker Arctic Technology Inc:

Aker Arctic is an independent company that specializes in the development, design, engineering and testing services for the ice-going vessels, icebreakers and offshore marine structures and ports. Aker Arctic’s head office is located in Helsinki Finland.

www.akerarctic.fi

About Deltamarin Ltd:

Deltamarin is a ship design, offshore engineering and construction Group operating in the marine and offshore industries worldwide. The services include the full range of consulting, design and engineering as well as procurement, construction and installation. The Group employs around 400 experts in its own and associated companies located in Europe and Asia. Deltamarin is a subsidiary of AVIC International Maritime Holdings Limited.

www.deltamarin.com