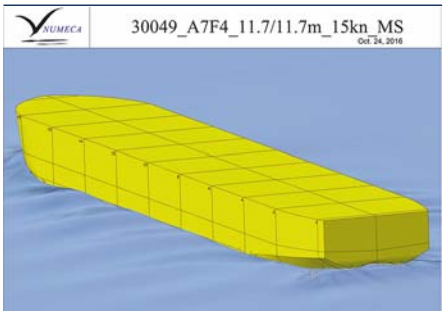
Aker ARC 212 Arctic Condensate Tanker

Aker Arctic



Aker Arctic has developed an Arctic Condensate Tanker for transporting gas condensate from the Yamal LNG's natural gas fields in the Russian Arctic to customers in Europe and Asia. The Arc7 ice class vessel is based on Aker Arctic's Double Acting Ship (DAS™) principle and it can operate independently in up to 1.8 m thick level ice.

Gas condensate is a low-density mix of light oils separated from natural gas before the liquefaction process. In the Yamal LNG project, this valuable by-product needs to be transported throughout the year from the port of Sabetta where the ice conditions can be very challenging and the air temperature can drop to -50°C during the polar night. Since the production of gas condensate diminishes over the lifetime of the field, the tanker is also capable of transporting other oil products as a product tanker.

Aker ARC 212 is designed to break ice stern-first in the most challenging ice conditions, allowing the vessel to operate independently without icebreaker escort. The operating principle is already successfully utilized in the shuttle tankers transporting crude oil from Varandey oil terminal and Prirazlomnoye platform. It will also be used by the LNG carriers transporting liquefied natural gas from the Yamal peninsula.

The vessel will feature a diesel-electric power plant and a propulsion system consisting of two azimuth propulsion units. The vessel can break up to 1.8 m thick level ice in continuous motion when operating stern-first. In light ice conditions, the vessel can sail in ahead direction. The hull form and moderate ice bow are designed for an economical service speed of 13 knots in open water. The Arctic Condensate Tanker can transport about 57,000 m³ of gas condensate or oil cargoes in five cargo segregates. All equipment and systems are winterized to -50°C ambient temperature. The cold temperatures are also taken into account in general vessel design in order to maximize crew comfort in the most challenging environmental conditions.

For more than a decade, the Double Acting Ship (DAS™) principle has allowed tankers and cargo ships to operate independently even in the most challenging ice conditions of the Russian Arctic. The development of the Arctic Condensate Tanker is based on the experience Aker Arctic has accumulated from previous successful ship projects and continuous research on icebreaking technology. It forms a strong foundation for future projects where safe and reliable year-round transportation system is required.

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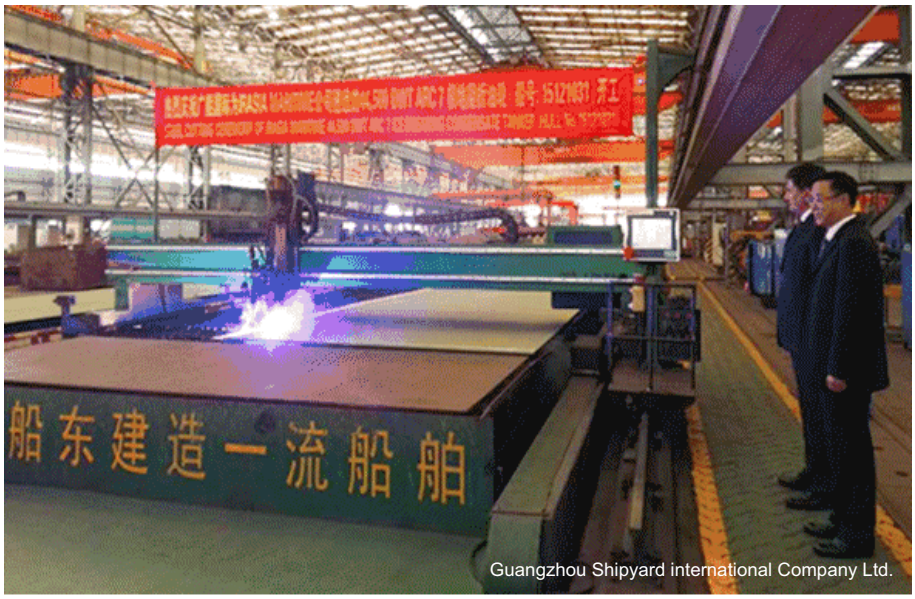
GSI to build Arctic Condensate Tanker based on Aker Arctic's design

After developing the concept for the Arctic Condensate Tanker, Aker Arctic and Guangzhou Shipyard International Company Limited (GSI) signed a design licensing agreement for the basic design and construction of the vessel. Previously, GSI has built two Polar Class 3 Arctic Module Carriers based on Aker Arctic's concept and basic design.

On 21st November 2016, GSI held the steel cutting ceremony for the Arctic Condensate Tanker at Guangzhou, China. The vessel is scheduled for delivery in 2018.



Guangzhou Shipyard international Company Ltd.

Main dimensions

Length, overall	214 m
Breadth	34 m
Draught, design	11.7 m
Draught, ice	12.0 m
Draught, scantling	12.9 m
Deadweight	43,400 tons (gas condensate) 49,700 tons (other oil products)
Cargo and slop tanks	about 57,000 m³
Main generating sets	2 x Wärtsilä 12V32 2 x Wärtsilä 16V32 31.4 MW (total)
Propulsion units	2 x 11 MW ABB Azipod
Icebreaking capability	1.5 m (ahead) 1.8 m (astern)
Service speed	13 knots
Ice class	RMRS Arc7 (equivalent to Polar Class 3)
Classification	Dual classification: Russian Maritime Register of Shipping Bureau Veritas

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The Ice Technology Partner