

# Port icebreaker ordered for Sabetta



Aker Arctic and FSUE Atomflot have signed an agreement with Vyborg Shipyard JSC to construct an Aker ARC 124 port icebreaker to support LNG carriers' operability in the approach channel to the Sabetta harbour and in the terminal of Sabetta.

The harbour icebreaker concept was developed in cooperation with JSC Yamal LNG and FSUE Atomflot in order to meet operational demands. As the vessel is intended to work inside the harbour area, it is a relatively small vessel, able to assist large tankers in turning and berthing.

This is a completely new concept with an exceptional hull form and a propulsion system with four azimuth thrusters: two in the bow and two in the stern. Manoeuvrability and operability are therefore excellent.

"The harbour icebreaker is a totally new concept especially developed for heavy harbour ice conditions with extensive thick brash ice," says chief designer Mika Hovilainen. "Some features are similar to the oblique icebreaker and the new icebreaker for the Finnish government, but in this one operability and harbour ice management capability have been taken one step further."

The brash ice layer is estimated to grow to a thickness of up to four metres in Sabetta harbour. This requires a special kind of vessel to assist tankers in turning and berthing. The harbour icebreaker has been designed to proceed at a speed of two knots in level ice 1.5 m thick and at four knots in 5 m thick brash ice in limited water depth.

**"The technical demands have been challenging, but with our persistent development work we have been able to solve them,"** managing director Reko-Antti Suojanen adds.

Ice model testing was conducted in July. We are now finalising the concept design and have made a basic design agreement with Vyborg Shipyard JSC to begin construction in 2016.

*Model tests, including tests in thick brash ice were carried out at Aker Arctic's ice tank. The testing was concluded in July 2015.*



## Aker ARC 124 main dimensions

Length	89.5 m
Beam	21.9 m
Draught	6.5 m
Deadweight	750 tonnes
Open water speed	15 knots
Bollard pull	115 tonnes
Propulsion power	12 MW
Ice class	RMRS Icebreaker7