

French polar logistics vessel advances



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Construction of the polar logistics vessel for France will begin this spring. Aker Arctic is supporting the shipyard also in the ship construction phase in the special requirements of an ice-strengthened vessel.

The design work and model testing have been completed for the new French polar logistics vessel, which will replace the existing vessels, L'Albatros and L'Astrolabe, and construction work is about to begin.

The steel hull will be constructed at CRIST in Poland starting this spring and then transported in autumn 2016 to the shipyard in Concarneau, France where it will be outfitted and finalised. The vessel is planned to be ready in summer 2017 so that it can sail to Antarctica when summer arrives to the southern hemisphere.

The first trip will be to France's research station Dumont d'Urville in Adélie Land and then the ship will continue to the Indian Ocean. The vessel will be based on Reunion Island and operate as a patrol vessel in the Indian Ocean. The French Navy will provide the crew for the new vessel, as the ship has patrol duties in addition to logistics tasks.

Support in construction

Aker Arctic is providing the shipyard with building time support spanning over the entire construction time in short periods at a time.

"Our engineers will stay on-site and supervise the work and give technical support during one or two weeks whenever there is a new phase in the construction," project manager Heikki Sipilä explains.

The Aker Arctic support focuses particularly on the vessel's construction and equipment so that winterisation, i.e. performance in freezing conditions, meets the set requirements.

"This is one of our services, which we can offer to customers building ice-going vessels. By combining our design and technical expertise with construction support, the customer can rest assured that all winterisation aspects are taken care of," Sipilä emphasises.

For the shipyard in France, this is an interesting project as they will be able to build an ice-strengthened ship with many special features. The demanding Antarctic conditions require, for instance, thicker materials of special quality than what is the case in ordinary vessel projects. This allows the shipyard to gain new experience and increases the possibility to participate in similar projects in the future.

Multi-purpose vessel

The owner of the ship provided the vessel concept. Aker Arctic then continued and finalised the design so that the ship would fulfil necessary performance in ice.

"Our design work consisted of our normal expertise such as developing the hull form and model testing it in both open water and ice in order to verify requirements," Sipilä outlines. "We also

The French polar logistics vessel is both a transport vessel and a patrol vessel.

performed sea-keeping tests to make sure that the vessel can manage in the rough sea conditions of the southern Atlantic. Additionally, we planned the machinery and winterisation aspects." The multitude of activities possible with this ship makes it very special. It can transport researchers to and from Antarctica. Furthermore, it has plenty of cabin and cargo space, a helicopter landing area and it can carry a helicopter in the cargo space. The rear is equipped with an A-frame that can be used to lower research tools into the sea. The icebreaking capability is 80 cm level ice.

"It is a logistics support vessel and a patrol vessel simultaneously," Sipilä says.

Main dimensions

Length	72 m
Beam	16 m
Draught	5.2 m
Deadweight	1,300 tonnes
Open water speed	14 knots
Propulsion power	6.4 MW
Ice class	BV Icebreaker 5