

Exploring the North Pole

In September 2021, Luigi Portunato and Jukka Salminen from Aker Arctic travelled to the North Pole onboard *Le Commandant Charcot*, the world's first hybrid LNG-driven polar expedition cruise ship.

The voyage was a dry-run organised by owner Ponant to train its crew to operate the ship in ice, practice all safety operations, and test lifesaving appliances and polar survival equipment, before the vessel's maiden cruise to Antarctica.



Le Commandant Charcot is currently the non-nuclear vessel with the most icebreaking capability in the world with its Polar Class 2 rating.

Historical journey

Portunato and Salminen boarded *Le Commandant Charcot* in Longyearbyen, sailing above the archipelago of Svalbard and across the ice-covered central Arctic Ocean to the North Pole where they stayed for four days. Their task was to support the crew in ice navigation, as this was something new to them, and gather feedback about the ship. The 15-day cruise ended in Tromsø in mainland Norway.

"The journey was historical from many perspectives," says Salminen. "It was the first ship under the French flag at the North Pole, the first cruise ship to reach this latitude, and the first hybrid LNG-powered vessel to travel this high north. *Le Commandant Charcot* is also the first ship in the world built to Polar Class 2, the second-highest ice class in the IACS system."

Astonishing performance

Salminen praises the vessel's performance as astonishing. "I have never experienced anything like it before, bearing in mind it is a cruise ship. Putting aside the luxury and five-star experience, it is, for the time being, the non-nuclear vessel with the most icebreaking capability in the world," Salminen highlights.



Luigi Portunato and Jukka Salminen from Aker Arctic travelled to the North Pole onboard the luxury cruise vessel to assist the crew with ice navigation and gather feedback on the vessel.

The vessel achieved its performance targets smoothly with hardly any noticeable vibrations from icebreaking. The ship's double-acting ability to break ice when sailing ahead or astern was tested in ice ridges to check the comfort level for passengers.

Survival camp on ice

Search and rescue operations for a ship in ice were tested by establishing a survival camp on the ice for 24 hours at the North Pole. 68 volunteers stayed in tents while the outside temperature was -10°C .

Portunato found the navigation system that uses satellite images of ice conditions particularly interesting. "Lectures about the Arctic were also held every day," he says.

Apart from the crew, Ponant employees and research scientists, there were plenty of invited guests and representatives from Canada, Greenland, Norway, Russia and the United States.

Safe travels

"When you have a vessel which is designed for its purpose, you can safely travel to the North Pole with passengers onboard," Salminen emphasises. "However, although the ice is thicker and the vessel is more robust, the principle of icebreaking is still the same as in the Baltic Sea."

"There is no doubt that the vessel is capable of reaching all destinations Ponant has planned," Portunato adds.

Aker Arctic developed the vessel concept together with Stirling Design International and the luxury cruise company Ponant. *Le Commandant Charcot* was delivered in July 2021 after its ice capabilities were verified in full-scale trials in June 2021. ■