

Rosatom manufactures nuclear fuel for the world's most powerful Icebreaker

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Rosatom has completed the manufacture and commissioning of the first reactor core for 'Rossiya', the lead nuclear icebreaker of the next-generation "Leader" project (Project 10510). The fuel for the reactor was produced by the Machine Manufacturing Plant, part of Rosatom's Fuel Division, and located in Elektrostal.

The Rossiya will be powered by two RITM-400 reactors, which are 1.8 times more powerful than the RITM-200 reactors used on Project 22220 universal nuclear icebreakers such as Arktika. Together, two RITM-400 reactors will deliver a total shaft power of 120 megawatts, making Rossiya the most powerful icebreaker ever built.

Unlike universal icebreakers designed to operate in both deep and shallow waters, the "Leader" icebreaker is distinguished by its exceptional power. It will be capable of breaking through ice more than

four meters thick and creating channels up to 50 meters wide. This capability will ensure reliable, year-round navigation along the eastern section of the Northern Sea Route (NSR). The vessel will also be able to escort ships at speeds of up to 12 knots through ice two meters thick.

The Northern Sea Route is the shortest maritime corridor connecting Europe and the Asia-Pacific region, stretching 5,600 kilometers from the Kara Gate Strait to the Bering Strait. Russia is currently the only country operating a fleet of nuclear icebreakers, which now includes eight vessels, with additional ships under construction. Top of Form