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**Rosatom’s mechanical engineers started assembling the vessel of the reactor for the nuclear icebreaker Leningrad**

*RITM-200 will be the “heart” of the Project 22220 icebreaker*

**On March 11, 2025, ZiO-Podolsk JSC (a company of Rosatom's Mechanical Engineering Division) along with the start of the flange machining operations started assembling the RITM-200 unit intended for the new-generation universal nuclear icebreaker Leningrad (the keel-laying ceremony was held in 2024 with the participation of Russian President Vladimir Putin).** Maxim Tyukavkin, Deputy Head of Rosatom’s Mechanical Engineering Division, and Anton Lebedev, Director General of ZiO-Podolsk JSC, participated in the launch ceremony.

“The Mechanical Engineering Division of Rosatom has launched the mass production of RITM-200 reactor units. This is yet another impressive demonstration of the absolute leadership of our domestic industry. Our technical solutions propel scientific and industrial progress, while also facilitating the fulfilment of tasks of national importance. Our successful history of manufacturing and operating the cutting-edge RITM reactor units provides a solid basis for reaching the goals of the Northern Sea Route development and SMR technology promotion,” pointed out **Maxim Tyukavkin**.

“We have acquired a wealth of knowledge and a large range of skills. Our expertise is unparalleled as we have mastered and launched the mass production of the latest RITM units. This is not only the RITM-200 for nuclear icebreakers and small nuclear projects, but also its more powerful counterpart, the RITM 400, which enables the year-round navigation along the Northern Sea Route,” added **Anton Lebedev**.

**For reference:**

**The Northern Sea Route** is the shortest shipping route connecting Western Eurasia with the Asia-Pacific region. The NSR administratively begins at the junction of the Barents and Kara Seas (Kara Gate Strait) and ends at the Bering Strait (Cape Dezhnev), spanning a distance of approximately 5,600 kilometers. The route traverses the seas of the Arctic Ocean, including the Kara, Laptev, East Siberian, and Chukchi Seas. The NSR serves the ports of the Arctic and of major Siberian rivers. Currently, there are six key seaports along the NSR in the Russian Arctic: Sabetta, Dikson, Dudinka, Khatanga, Tiksi, and Pevek.

The power units for new nuclear ships have two RITM reactors. RITM is the most advanced and efficient reactor unit in the world, weighing half as much, being 1.5 times more powerful and occupying 1.5 less space compared to their Soviet-made counterparts, which make the icebreakers more effective in terms of its speed and icebreaking capabilities. This has ensured an increase in the volume of cargo transported along the Northern Sea Route. A record 37.9 million tons of cargo were shipped and 92 transit voyages were made in 2024.

At present, there are the Arktika, Sibir, and Ural new generation nuclear icebreakers (project 22220) in service, each equipped with the RITM-200 unit. The flag-raising ceremony took place on the Yakutia icebreaker in late 2024. The construction of the Chukotka and Leningrad universal nuclear icebreakers of project 22220 is currently in progress.

The RITM-200 nuclear reactor units have demonstrated their effectiveness in the challenging Arctic environment, providing the basis for such energy solutions as floating power plants and SMR-based nuclear power plants capable of supplying electricity to remote regions both within and outside the country. As a result, a series of floating power plants is being constructed to provide electricity to major industrial consumers in Chukotka and a project is being implemented to construct the world’s first land-based nuclear power plant with the RITM-200 unit in Yakutia. In addition, an agreement has been signed to construct an SMR-based nuclear power plant with six similar reactors in Uzbekistan.

Rosatom has the entire chain for manufacturing propulsion nuclear reactors, from design and production of blank parts to manufacturing and installation of equipment. Rosatom’s Afrikantov OКВМ JSC is the product designer and package supplier. ZiO-Podolsk JSC manufactures reactors and other package units for nuclear power plants.

ZiO-Podolsk JSC has already manufactured 10 RITM-200 units for project 22220 versatile nuclear icebreakers Arktika, Sibir, Ural, Yakutia, and Chukotka. These units, when commissioned, will make it possible to fulfil the tasks under the large-scale plan to develop the Northern Sea Route launched by the decision of the President.

The Russian Government has appointed Rosatom the Northern Sea Route infrastructure operator. Rosatom is responsible for overseeing the implementation of the federal project “Development of the Northern Sea Route” also being involved in the plan for the development of the Northern Sea Route until 2035 and the initiative for the socio-economic growth of the Russian Federation until 2030 “Year-Round Northern Sea Route” approved by the order of the Russian Government.