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**Electric motors idling of all four reactor coolant pumps performed at Akkuyu NPP Unit 1**

*Idling is one of a series of key operations of the pre-commissioning works stage preceding the commissioning of the Unit*

**March 14, 2025, Büyükeceli, Mersin Province, Türkiye. – Another stage of pre-commissioning works was completed in the reactor building of Unit 1 of Akkuyu NPP (being built by Rosatom State Corporation in Türkiye).** Step-by-step idling of the electric motors of all four reactor coolant pumps was performed. Having ensured the pumps readiness, specialists fulfilled one of the conditions for the start of circulating, flushing and hydraulic testing, when the primary coolant circuit will be filled with desalinated water to check the density and endurance of all its elements.

The idling operation consists of applying a 10 kV power supply, turning on the electric motor and operating it at the rated speed. During the operation specialists checked the lubrication and cooling system of the bearings as well as monitoring, control and technical diagnostics systems. The testing performed confirmed the compliance of the main parameters and characteristics with the electric motors testing program.

At the next stage it is planned to run-in electric motors in accordance with the requirements of the factory documentation and re-commissioning works programs.

There are four reactor coolant pumps in the primary coolant circuit of the reactor plant, one on each loop of the reactor coolant pipeline.

“Each preparation stage for the operation of Akkuyu NPP Unit 1 is unique for Türkiye. Based on the long-term experience of Rosatom's engineers, designers and commissioning specialists, a series of complex technical operations are being implemented for the first time in the history of the Republic of Türkiye that bring us closer to the major event at Unit 1. The step–by-step idling of the electric motors of all four reactor coolant pumps is a necessary and important part of the pre-commissioning works preceding the first criticality of Unit 1. The readiness of the electric motors of the circulation pumps determines the deadlines for the start of the cold-hot running-in stage of the reactor plant, when the pump assemblies will be activated. When operating the Power Unit, four reactor coolant pump sets will ensure the circulation of coolant through the reactor core,” said Akkuyu Nuclear JSC Chief Executive Officer **Sergei Butckikh**.

**For reference:**

**On reactor coolant pump sets**

The reactor coolant pump sets used at the Akkuyu NPP belong to the latest generation of NPP equipment with VVER-1200 reactors. They differ from the equipment of the previous generation by water, not oil being used to lubricate and cool the pump and electric motor components. The exclusion of the oil system increases the fire safety of nuclear power plants, and reducing the number of bearings makes the unit more reliable.

The reactor coolant pump set (RCPS) is an integral part of the reactor plant, providing forced circulation of coolant in the primary circuit through the reactor core. The equipment of about 120 tons, consists of the pump itself, an asynchronous motor with water-lubricated bearings, and auxiliary systems. At a rotation speed of 1000 revolutions per minute, the pump is capable of pumping liquid with a volume of 21,900 cubic meters per hour. The working design pressure of the pump is 17,64 MPa. Extremely high-quality requirements are imposed on the RCPS. This is due to the operation of equipment in a radioactive environment.

The design features of the new generation RCPS make it possible to reduce the maintenance time of pumping equipment.

**Akkuyu NPP Project**

Akkuyu NPP is the first nuclear power plant being built in the Republic of Türkiye. The Akkuyu NPP project includes four power units equipped with Generation 3+ VVER reactors of Russian design.

The capacity of each power unit will be 1200 MW. Akkuyu NPP is the first project in the global nuclear industry being implemented according to the Build-Own-Operate model.

Russia is developing scientific and technical cooperation with all interested countries. The implementation of major international projects also continues. Rosatom and its divisions take part in this work.