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**The dome of the outer containment of the Akkuyu NPP Unit 1 (Turkey) installed in the design position**

*The dome construction process takes place in several stages: manufacturing of composite elements of metal tiers, their installation and step-by-step concreting*

Russian and Turkish specialists have installed the dome of the outer containment (OC) in the design position at the Akkuyu NPP Unit 1 (being built by Rosatom State Corporation in Turkey). It is the last component of the OC.

The dome weight is 147.6 tons. Its diameter is 34.7 meters. The installation of the heavy metal structure in the design position took 6 hours and was carried out using the world's most powerful tracked self-propelled crane. Thirty Akkuyu NPP specialists took part in the installation operations. OC is one of the physical barriers of the NPP defense-in-depth.

"The outer containment dome has been mounted in the design position at elev. of +57.100 to +65.400 meters. The OC will ensure the reliability and safety of the reactor building. Its sturdy steel structure is able to withstand extreme external impacts, as well as their combinations. The next stage will be concreting the OC metal structure with high-strength concrete mortar. This will allow us to start installing the heat removal system equipment," noted Sergei Butckikh, Chief Executive Officer of Akkuyu Nuclear JSC.

Akkuyu NPP specialists have formed the metal frame of the dome outer containment at Unit 1. Both tiers are connected by welding. The total weight of the dome part was almost 500 tons. Wall thickness after concreting will be 1.5 meters.

The outer containment is formed of reinforced concrete and is designed in such a way as to withstand earthquakes with an intensity of up to 9 points on the MSK-64 scale, hurricanes with a force of up to 60 m/s, tsunamis and shock waves up to 10 meters high.

Modern Russian-designed power units with VVER-1200 reactors are equipped with a system of double (inner and outer) containments, which ensure the maximum level of safety of the nuclear power plant and add additional strength to the reactor building. In addition to the outer one, there is also an inner containment (IC). It ensures leak-tightness of the reactor building, acts as support for pipelines and a polar crane which is used for nuclear reactor maintenance operations at the NPP operation stage.

**For reference:**

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 III+ 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 actively developing scientific cooperation with all interested countries. The implementation of major international projects also continues. Rosatom and its divisions take an active part in this work.