

## **Assembly of the last unit A4**

### **Runner installation marked the finish of one of the most significant phases in Unit A4 revitalization**

At the Zvornik hydroelectric power plant, as part of the revitalization of the A4 generator, on 9 October, the rotor was transported from the assembly hall and installed into the generator stator, i.e. generator shaft. This completes one of the most important phases in the revitalization of the last unit, and in order to achieve it, a number of assembly works had to be carried out, such as installation of the main components of the turbine, such as the runner, turbine cover, wicket gates, main turbine control components (tanks, pumps, pipelines, servomotors, control ring), installation of the turbine bearing, guide bearing and connection of the generator and turbine shaft. Auxiliary components of the turbine were also mounted: sensors, treads, transducers, equipment supports, etc.

Generator rotor has been completed in the assembly hall of the power plant, from where it was transported and installed, while the installation of the generator stator was done in the generator barrel - at the place of installation.

Installation of almost all primary and secondary electrical equipment, such as 110 kV switchgear, unit transformer, generator buses, generator voltage equipment, control equipment - cabinets, protection and motors and other auxiliary electrical equipment, has been completed.

The cooling water and compressed air systems are largely installed and will be completed in parallel with turbine, turbine control and generator installation.

- In the coming period, the following activities will be completed: installation of the upper cross and the upper generator bearing, installation of the upper generator covers, generator sliding rings and their connection with the rotor poles, installation of the turbine oil head, continuation of equipment cabling, connection of the 110 kV switchgear to the first transmission line serving to connect to unit to the grid - Tomica Jovanovic, head of production department at HPP Zvornik, pointed out.

In addition to mounting, equipment must also be tested and adjusted (fluid leak checking, centering, electrical testing).

Completion of assembly work is planned for November 30, when the unit tests will begin after the installation has been completed. Completion of tests, including a 30-day test run of the unit, is planned for 5 February 2020, when the unit enters commercial operation, i.e. one year warranty period.

Revitalized units A1, A2 and A3 have undergone or are undergoing repairs and eliminating deficiencies observed throughout their operation.

In addition to the revitalization of the A4 generators and the repairs of the A1, A2 and A3 units, activities are underway to obtain permanent grid connection solution of the

revitalized HPP Zvornik units, as well as to receive an operating permit.

The revitalization of the A4 generator at Zvornik HPP officially began on 11 February 2019. The revitalization project is headed by Voith Hydro, while the subcontractors are mainly domestic companies: Gosa Montaza, Elnos, Mihajlo Pupin Institute and Elektroremont.  
Source: EPS Energija