

Belgrade Waterworks and Sewerage in Serbia

BELGRADE UTILITY UPGRADES DRINKING WATER TREATMENT PLANT WITH UV DISINFECTION

Belgrade Waterworks and Sewerage, one of the largest public water utilities in the Balkans, provides water services for the capital city of Serbia. To meet the needs of the city's growing population, the utility upgraded one of its drinking water treatment plants with a UV disinfection system from Xylem.

The utility's Makiš water treatment complex includes three water treatment plants: Jezero, Makiš and Makiš II, which was commissioned in 2014. Together the plants provide drinking water for about two million people, including Belgrade and the surrounding area.

The utility decided to upgrade its Makiš II drinking water treatment plant with UV disinfection technology. The previous UV disinfection system did not meet the necessary requirements and standards, and lacked adequate service support. To solve this problem, the plant bypassed the UV system and used chlorination as the main disinfection treatment

High-quality, energy-efficient UV disinfection

In 2019, the utility worked with Xylem's Wedeco distributor, Moser, to find a new UV disinfection system for the Makiš II plant. The utility decided to replace three of the six old UV units with Xylem's Wedeco K143 reactors.

The strength of these reactors lies in the combination of its inline installation and the use of energy-efficient, high-intensity low pressure UV lamps. Each reactor can disinfect large amounts of drinking water, up to 6,300 cubic meters per hour, while minimizing energy requirements. The WEDECO K143 reactors inactivate viruses, bacteria, and parasites without using chemicals and therefore avoiding any taste or odor issue, as well as any unwanted by-product.

In April 2020, after several months of production, the new UV units were ready for shipment and installation. Due to Serbia's COVID-19 restrictions, however, the installation had to be postponed until the beginning of June. By July 15, the installation was complete, and the utility could begin programming the system and training its personnel.



Old units.



Removal of old units.

END CUSTOMER: Belgrade Waterworks and Sewerage, Makiš II drinking water treatment plant.
CHALLENGE: Efficient and sustainable UV disinfection.
XYLEM'S SOLUTION: Three Wedeco K143 UV reactors.

Disinfecting 1,200 liters of water per second

Belgrade Waterworks and Sewerage was amazed with the quality and easy operation of the Wedeco K143 reactor units. Each reactor could disinfect 1,200 liters of water per second, enabling the plant to switch to using UV as its main disinfection treatment.

After the UV disinfection stage, the water is chlorinated in tanks to avoid microbiological growth and meet regulations that require water transported in pipelines to contain chlorine.

“We are very pleased with the new Wedeco UV disinfection system,” says Vladimir Vuković, Makiš Plant Manager. “It’s high quality treatment and ease of use have enabled us to switch to UV disinfection to meet the needs of our growing city.”



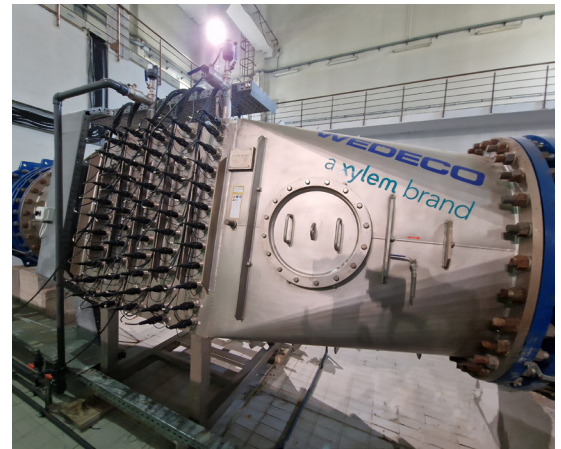
Reactors in operation.



Insertion of the new Wedeco K143 reactors.



Insertion of the new Wedeco K143 reactors.



Wedeco K143 unit.

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