



Spectacular water network expansion in Zagreb County with Amiblu GRP



Amiblu®

To connect an additional 30,000 inhabitants to the local water supply system, CC-GRP Amiblu pipes were jacked in a curve underneath the Sava River. They serve as sleeve for a new potable water pipeline, built of FW-GRP Amiblu pipes.

How can one part of a county be connected to a water supply system located on the opposite bank of a major river? A challenging task, asking for an expert team and an elaborate solution. 30,000 residents of the eastern part of Zagreb County were to be provided with their own water pumping station and sufficient quantities of drinking water for homes and industry. To realize this, a connection had to be made to the Kosnica water pumping station on the other side of the Sava River.

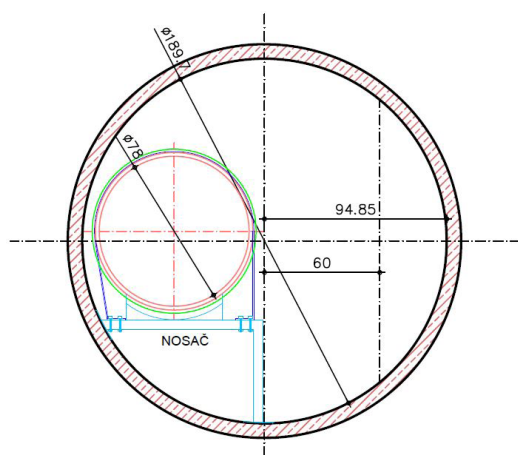
The elaborate solution: A curved installation via microtunneling of 675 m centrifugally cast Amiblu pipes (Hobas) with an outside diameter of 2047 mm under the Sava riverbed. Inside this protective GRP channel, another pipework was laid – the actual drinking water pipeline, built of 690 m filament wound Amiblu pressure pipes (Flowtite) DN 800, PN 16. The curved route of both pipelines has a radius of 5100 m – a challenge that could be easily met thanks to the allowed deflection in the couplings for both types of pipes.

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Country City	Croatia Zagreb County
Year of construction	2021-2022
Application	Potable water
Total length of pipe	675 m (CC) 690 m (FW)
Nominal diameter	DA 2047 (CC) DN 800 (FW)
Nominal stiffness	SN 80,000 (CC) SN 10,000 (FW)
Nominal pressure	PN 1 (CC) PN 16 (FW)
Technology	Flowtite FW, Hobas CC
Installation	Microtunneling
Client	Vodoopskrba I Odvodnja Zagrebacke Zupanije
Contractor	COMPRA d.o.o. Aquaterm d.o.o.
Planner / designer	HIDROEKO d.o.o.

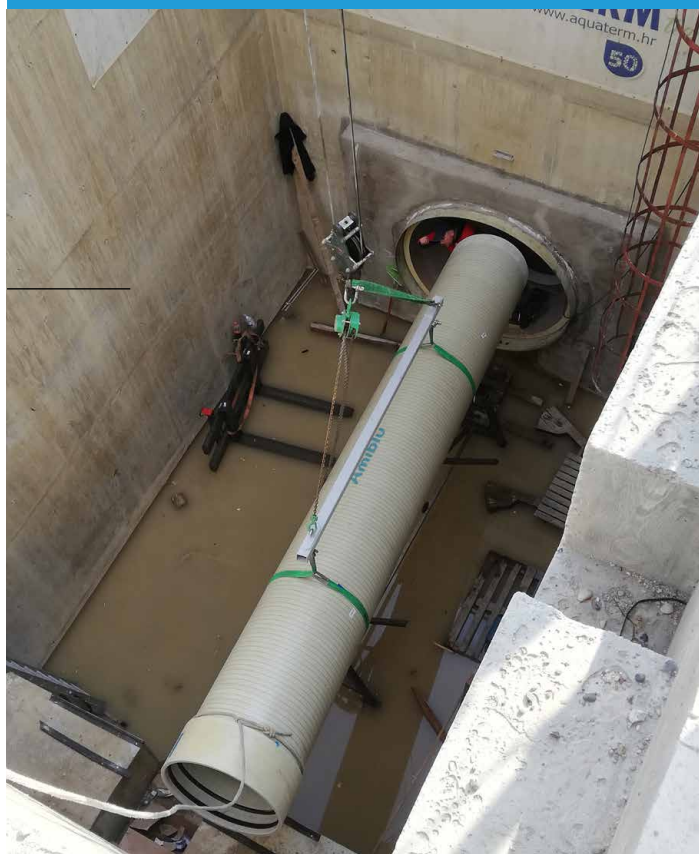
Microtunneling was performed by Aquaterm d.o.o., using Herrenknecht equipment. Every third pipe had nozzles for bentonite injection, and two intermediate jacking stations were in use. The entrance pit was about 12 m and the exit pit 10 m deep.

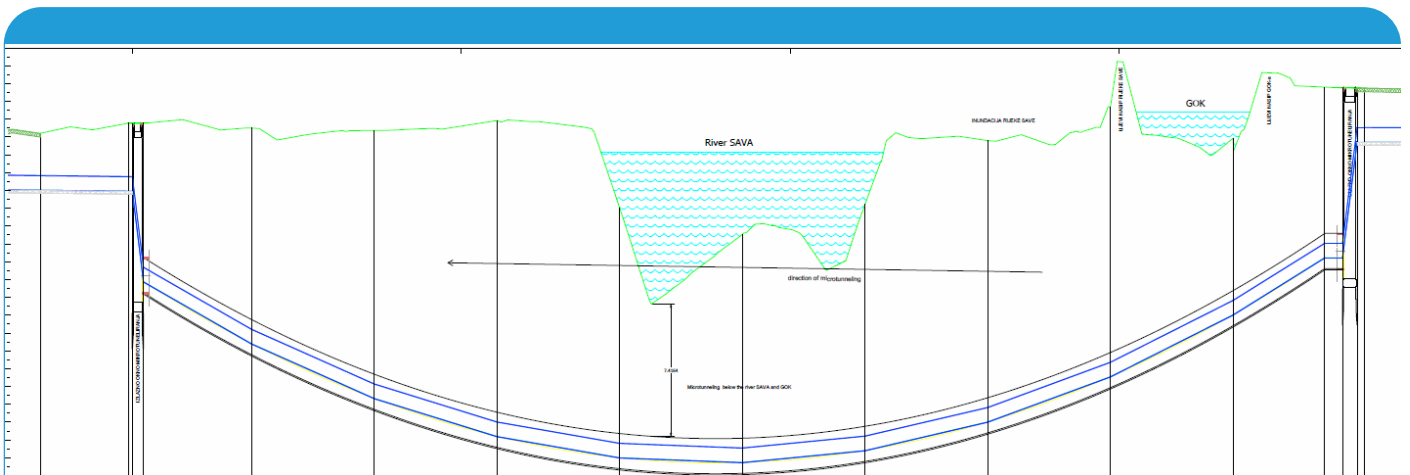
In the middle of the pipe route, the jacking pipes were installed at a depth of 9 m below the bottom of the Sava riverbed and about 20 m below water level. After 38 days, at a pace of 18 m per day, the microtunneling installation was successfully completed in 2021.



Amiblu CC-GRP pipes were jacked in a curve under the Sava riverbed with Herrenknecht equipment

The FW-GRP potable water pipeline was inserted into the protective sleeve and then installed with the help of special transportation brackets





Longitudinal profile of the microtunneling route

In a next step, the GRP potable water pressure pipeline was installed inside the protective sleeve. Considering the great depth, the pressure from the river above, and the length of the curved pipelines, plus the need for a perfectly leakproof system solution, each step of the works was done with maximum attention and precision. The installation of the potable water channel was completed after 3 months in 2022.

The project counts among the most technically demanding microtunneling installations ever performed in Croatia. By now, the residents of eastern Zagreb County can count on a reliable water supply system for the next generations.

Contact details:

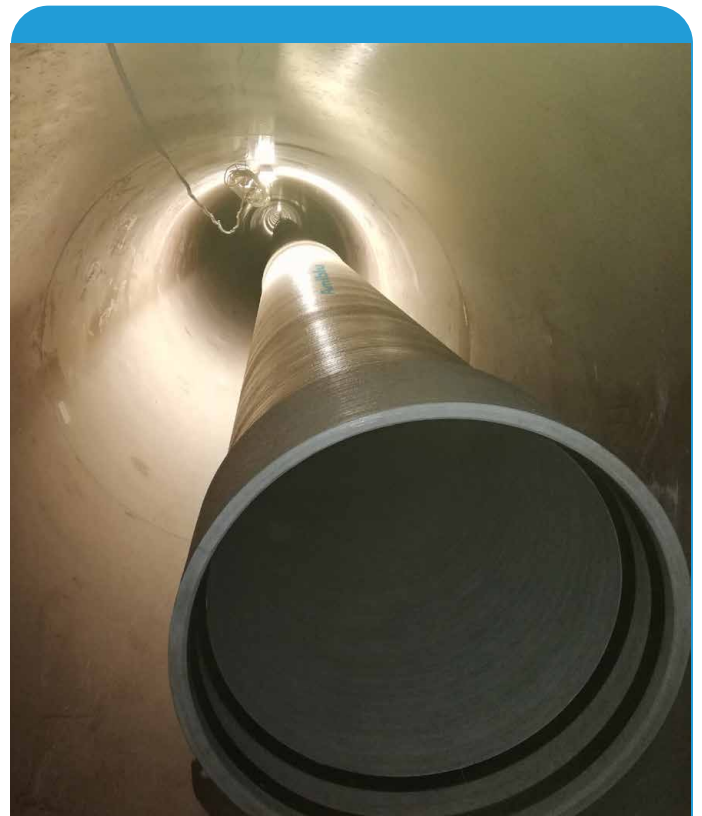
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2-in1 water management solution:
Amiblu makes it possible

Click on the picture or scan the QR code to watch a video about the installation!

