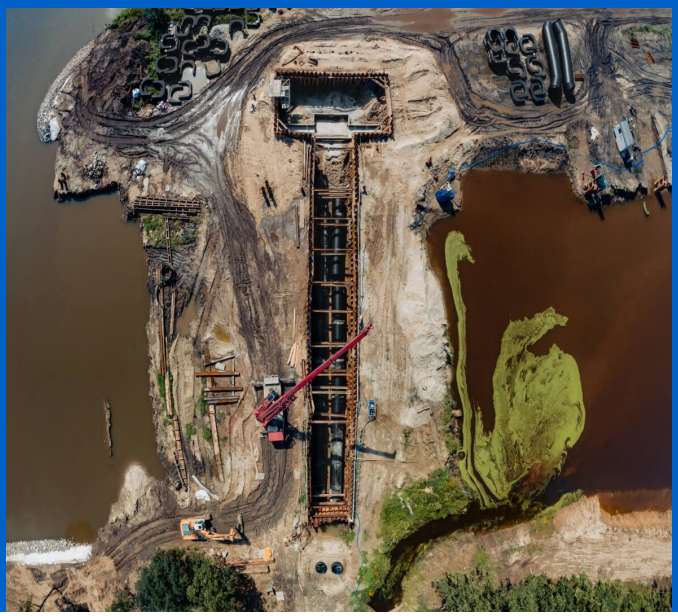
References

Modernization of the lock on the barrage



Uponor involvement

- Weholite pipes PE100 DN2000 SN8 - 186,4 m as well as special fittings and segmented bends
- Extrusion welding of Weholite pipes by the Uponor Infra Service Group using the WL-3000 automatic extrusion welding machine

Krapkowice barrage - reliable PE pipes on the modernization of the lock

At the Krapkowice barrage, the lock and control room are being modernized and the outports are being reconstructed. Uponor Infra delivered Weholite DN2000 SN8 polyethylene pipes as well as manholes, segmented bends and special fittings for this construction.

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The aim of the investment "Modernization of the lock and the control room on the Krapkowice barrage along with the reconstruction of outer harbors", implemented by PGW Wody Polskie Regional Water Management Authority in Gliwice, is to improve and ensure navigation on the Oder Waterway. The investment includes the construction of a new lock chamber with a length of 190 m and a width of 12 m with equipment. As part of the construction works, the existing draft chamber will be reconstructed, which will guarantee the continuity and safety of navigation, and the waterway from class III will be upgraded to class V navigability. A siphon culvert for the Sonia River will also be built under the outer ports of the main locks to drain water from the nearby polder. This arrangement will increase the flood safety level. The construction cost of the new Krapkowice lock is over PLN 209 million, most of which comes from the EU Operational Program Infrastructure and Environment 2014-2020.

Project Facts:

Location	Completion
Krapkowice, Poland	2023
Building Type	**Product systems**
Transportation	Tailor made constructions

Partners

Investor:
PGW Wody Polskie Regional Water Management Authority in Gliwice

Contactor:
POM Krapkowice

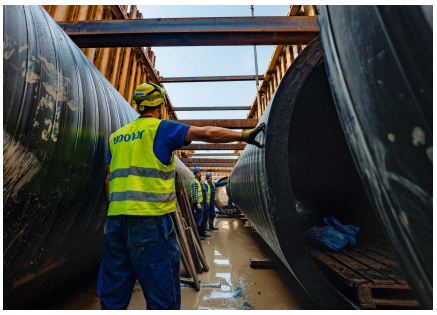
A double line of the Weholite siphon culvert under the bottom of the Odra River

Hydrotechnical investments are complex and advanced engineering projects, carried out in difficult soil and water conditions. That is why it is so important to choose experienced contractors and proven materials for their implementation. In the case of this investment, the contractor of the works is POM Krapkowice, and the supplier of materials for the construction of the double line of the siphon culvert is Uponor Infra - a company with over 70 years of experience in the production of PE and PP pipe systems. Uponor Infra is known for the implementation of technically advanced engineering projects. She has participated in many prestigious investments, often record-breaking in terms of the parameters of the pipes used. For the investment in Krapkowice, the company supplied Weholite PE100 DN2000 SN8 pipes with a length of 186.4 m, as well as large-size special fittings and segmented bends.

Polyethylene pipelines are completely resistant to corrosion, fouling and chemical factors, including changing pH of water and soil. Light elements are easy to unload and install. Thanks to their flexibility and perfect cooperation with the ground, they are resistant to terrain impact, which is why they can be used in difficult ground and water conditions, as well as in floodplains and areas of mining damage up to category IV inclusive. Excellent material properties of polyethylene pipes and assembly of elements by extrusion welding is a guarantee of 100% tightness of the system and transfer of all axial forces. The method ensures a homogeneous connection, full control and a high safety margin in the case of difficult working conditions. As a result, the service life of pipelines exceeds even 100 years.

The double line of the siphon culvert was installed under the bottom of the Oder River using the open trench method. The connection of the pipeline sections was made by the Uponor Infra service group using the WL-3000 automatic extrusion welding machine. The scope of works related to the siphon culvert included the construction of sheet piling, excavations in the cofferdam, construction of the foundation, laying of pipelines with manholes and construction of the inlet abutment to the culvert and the outlet of the culvert.
Completion of the investment at the Krapkowice barrage is planned for the third quarter of 2023.

Modernization of the lock on the barrage







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