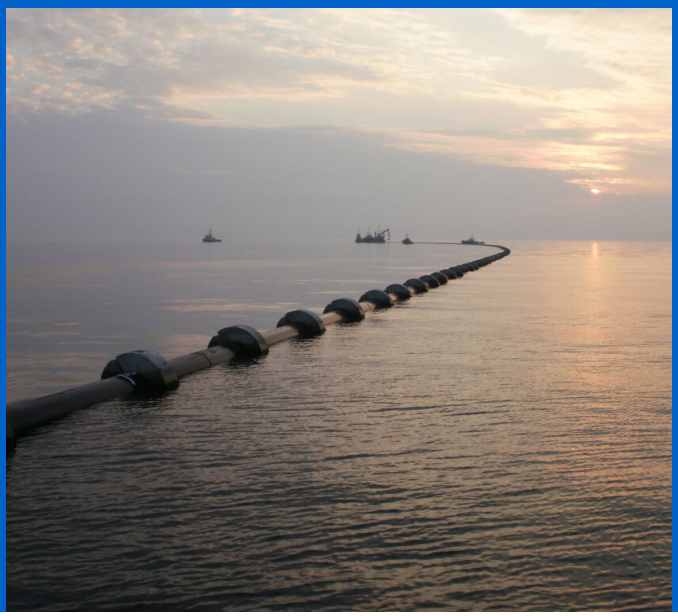
References

Sea outlet of treated wastewater



Uponor involvement

- PE pipes WehoPipe DN710mm SDR22 – 1,160m

Sea outlet of treated wastewater

A sea outlet of treated wastewater was initiated in Swarzewo. It is yet another of the many environmentally friendly projects that have recently been carried out in Poland where PE pipes were used.

A sea outlet of treated wastewater was initiated in Swarzewo. It is yet another of the many environmentally friendly projects that have recently been carried out in Poland. Like other projects aiming to make local water and sewer systems compliant with strict EU standards, the success of this project also depended heavily upon the quality of the materials used, as well as the reduction of cost and construction time. The use of WehoPipe PE-HD pipes made it possible to fulfil all of the requirements.

Project Facts:

Location
Swarzewo, Poland

Completion
2014

Building Type
Municipal

Product systems
Tailor made constructions

Project Type
New building

Partners

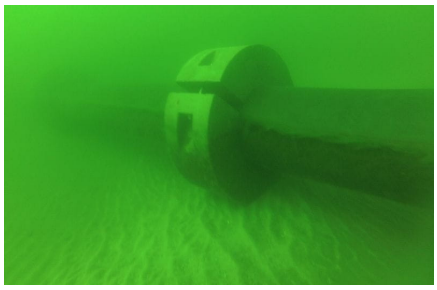
Designer:
AQUAPROJEKT Gdańsk
Investor:
Spółka Wodno-Ściekowa Swarzewo
Contractor:
PRCiP Sp. z o.o. Gdańsk

Underwater pipeline – a sea outlet is part of a larger ecological project in the region of the Baltic Sea, called "Final reorganisation of waste management in the agglomeration of Puck", associated also with the extension of the wastewater treatment plant, extension of the sewerage in Swarzew, and discharge of treated sewage into the sea. The investment is intended to protect the inshore land and waters of the Baltic Sea using controlled discharge of waste which has parameters required by the law and to enhance the investment and tourist potential of Puck, Władysławowo and the neighbouring areas.

For the project, Uponor Infra manufactured nearly 1.2 km or PE pipes – WehoPipe PE 100 SDR 22 DN 710. The pipes were delivered in 15-metre sections and then butt-welded on the wharf of the contractor. The contract also obliged the company to provide welding machines and installation crew, who made most of the joints including a non-standard fitting (diffuser). The next step was the installation of concrete blocks on the pipeline to facilitate the sinking operation. The weight of the blocks was so designed that the collector, filled with water, was safely placed on the riverbed. The discharge pipeline was towed by tugboat to the installation place and submerged.

Uponor Infra has been delivering for years the pipe systems to discharge the treated wastewater deep into the sea. At present the sea outlets are a standard solution and are very popular in Europe. They used to be made from steel, but along with the development of new materials this type of pipelines are now practically made only in PE technology. Polyethylene pipes are flexible, which makes them easily adaptable in various soil conditions and increases their resistance to vibrations, load and soil movement. Due to their low weight, PE pipes are easy and quick to install. They can be manufactured in considerably longer lengths than traditional pipes, which significantly shortens the installation time. What’s more, polyethylene pipes have superior chemical resistance and don’t corrode, which is a key factor when it comes to applications in salt water. For this reason polyethylene gained a worldwide recognition as the best material for the construction of low pressure underwater pipelines or the transport of water and sewage.

Sea outlet of treated wastewater



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