

HOBAS® NC Line Installed on Danubian Plain

Egg-shaped profiles installed by open cut for sewer system in Vidin, BG

Within the renovation and expansion of the water supply and sewerage system in the Bulgarian port town Vidin, 5500 m egg-shaped HOBAS NC Line Profiles in a diameter range from 500/750 mm to 1400/2100 mm have been successfully installed in open trench. Their hydraulic properties prove especially beneficial in view of the flat terrain.

The town of Vidin is located at about 35 m above sea level on the Danubian Plain in north-western Bulgaria, close to the Romanian and Serbian borders. Over the past several years, the town's sewer and water supply system had to be modernized and newly built. The reasons for this were manifold: The old sewage system served only 89 % of the population, some of the existing concrete channels had already collapsed and had small diameters which were not capable of handling larger water quantities. Due to the terrain's minimal slope of 0.5 to 1.5 ‰, the main sewers were also frequently blocked, and there was no wastewater treatment plant in the area.

In 2013, the EU-financed project "Rehabilitation and Extension of the Water Supply and Sewerage Systems in Vidin, Bulgaria" with a value of roughly 75 million Euro was initiated to remedy these problems. The project included the construction of a wastewater treatment plant, two sewage pumping stations, a 3 km extension of the existing sewer network, the rehabilitation of 11 km of sewer networks, and 13 km of water supply networks. By these measures, the pollution of the Danube River as well as the risk of ground and surface water contamination should be reduced, and the environmental conditions and water utility infrastructure in Vidin improved.

Year of Construction

2013/2014

Total Length of Pipe

5500 m

Diameter

400/600 mm –

1400/2100 mm

Stiffness Class

SN 10000

Application

Sewer line

Installation Method

Open cut

Client

Municipality of Vidin

Contractor

Stanilov EOOD

Advantages

Optimum hydraulic properties, leak-tight system, corrosion resistance, long service life, easy installation, post-sales service



The main challenge for the sewer system expansion was the flat area and low gradient around Vidin. The designers Eco-Engineering LTD and the construction company Stanilov EOOD therefore decided to renew the pipe system by use of egg-shaped profiles with a stiffness of 10000 N/mm² and outstanding hydraulic properties, which should ensure an optimal water flow even at low flow rates. Among different suppliers with similar project references, the final decision was made in favor of HOBAS. The company scored not only thanks to a number of successfully implemented projects in Romania: HOBAS NC Line Profiles with their smooth inner surface and small roughness coefficient, as well as the easy installation of the leak tight system, more than fulfilled the given requirements.

HOBAS Experts from Bulgaria and Germany conducted all technical calculations and custom-tailored the profiles to the project specifications. End of 2013, the egg-shaped profiles SN 10000 in a wide range of cross-sections were supplied – 400/600 mm, 500/750 mm, 600/900 mm, 800/1200 mm, 900/1350 mm, 1000/1500 mm, 1200/1800 mm, and 1400/2100 mm. The resulting 5.5 km long NC pipeline was literally “rounded off” with 130 m circular HOBAS Sewer Pipes DN 2000 SN 16000. The installation started at the beginning of 2014 and was successfully completed in April 2015. HOBAS Site Advisors and Engineers provided their full support throughout the installation process.

Fmd: hobas.bulgaria@hobas.com

