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Experts Float New Solution

HOBAS® Pipes for Sewer Rehabilitation in Szczecin, PL

The HOBAS Experts had to pull out all the stops when renewing a sewer in Szczecin. Lack of space forced the engineers to tackle the problem from a different angle, but first things first...



non-circular interceptors. HOBAS Products' corrosion resistance, low weight, high structural load capacity and easy installation convinced the contractor straight away and the HOBAS NC Line® Experts' wealth of experience helped the designers to find the right shape for the sections and the appropriate wall thickness.



Szczecin is the seventh largest city in Poland, located about 120 km north-east of Berlin on the River Oder estuary, and has one of the biggest ports on the Baltic Sea. The contract for rehabilitating 47.6 km of sewers running under 52 city streets was signed by the consortium PBG S.A. and Diringer & Scheidel Rohrsanierung GmbH & Co. KG in December 2004. Rehabilitation had proved necessary because the old brick sewers and concrete pipelines built in 1904/1905 and the 1930s had become considerably damaged with cracks, corrosion and infiltration. In fact, some of the pipes were no longer capable of bearing loads and in danger of collapsing. Having carefully inspected the state of the sewers, the contractor recommended GRP pipes and sections as being the most suitable material for rehabilitating the circular and

Work began in December 2004. HOBAS supplied egg and jaw-shaped profiles in sizes 400/543 mm through 2626/1540 mm and relining pipes in De 960 through De 1434, SN 5000 through 20000 with jacking couplings. INFRA carried out the construction work on site. They installed the pipes and sections from existing manholes or special access shafts, with the various different pipe lengths making the work much easier. In the straight runs, for example, they used 2.25 - 2.35 m long pipes and 0.5 - 1.5 m long ones in the curves. Unlike other pipe materials, HOBAS Products can be cut anywhere along their length due to the innovative centrifugal casting process and also shortened on the construction site without affecting their chemical or structural properties.



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This meant that the company could also work with 6-meter, De 960, SN 20000 pipes on Dworcowa Road. The sewer with a cross section of 1200/1000 mm conveys water to the harbor in Szczecin.

A great challenge during installation here was the narrow streets that called for a creative solution on the part of the contractor. What they came up with was a raft that they anchored in the harbor and used as an installation platform. A crane placed the pipes onto the 22 x 8 m floating steel platform and from there they were pulled into the existing pipeline using a winch in a shaft located 100 m away from the harbor.

To secure the new sections in the old sewers and protect them against the groundwater pressure, the pipes were inserted and fixed in the old ones, thus preventing distortion and floating. The annulus between the pipe and new lining was then filled.



Thanks to the outstanding properties of HOBAS Pipes and NC Line Sections, the population will enjoy the benefits of the new maintenance-free sewers for many years to come. The excellent mechanical and hydraulic characteristics and long service life impressed the investor and he is more than satisfied that he chose the right product. For the contractors it was the short delivery times and easy installation that were most important, as they could then complete the work in a timely manner. A successful project all round with everyone involved happy and a creative installation solution – what more could you want?

Overview	
Year of Construction	2004 - 2008
Total Length of Pipe	2,298 m
Diameter	De 960 - 1434, NC Line® Profiles: 400/543 - 2626/1540 mm
Pressure Class	PN 1
Stiffness Class	SN 5000 - 20000 NC Line® Wall Thickness: 10 - 48 mm
Installation Method	Relining
Application	SewerLine®, NC Line®
Client	ZWiK Sp. z o.o. Szczecin
Constructors	PBG S.A, INFRA Sp. z o.o.
Advantages	Easy installation also from floating platform, low weight, little space required during installation, pipes can be cut on site, corrosion resistance