

HOBAS® - and the Heat Is On

Relining Cooling Pipes in Bremen, Germany

The German city Bremen obtains a part of its required energy from one coal-fired cogeneration plant situated in the harbour and consisting of two blocks with an output of 400 MW. A medium-caloric power plant is currently constructed at the same site and will supply further 29 MW as well as district heat. This output covers the energy consumption of 90,000 households.

Special about this new power plant is that the use of the fossil fuel can be reduced considerably by using so-called medium-caloric fuels to generate power and heat. This fuel consists of a mixture of paper, plastic, wood and packaging materials. Until 2005, residual material like this was stored at waste dumps as it was unsuitable for recycling. Other than black coal, it primarily consists of renewable raw materials yet generates a similar heating value. Thus, the operator of the power plants, Bremen's public utility, is able to save over 90,000 tonnes of coal and reduce the environmentally harmful CO₂-emission by around 230,000 tonnes.

In summer 2008, corrosion was discovered on a cooling water pipe in the heating power plant. This asked for immediate repair under strict safety conditions, without restricting the energy production and without endangering the construction schedule of the new plant.

An open trench construction was not an option as the line crosses a coal storage area which would have had to be removed with tremendous effort. Under the given conditions, relining with HOBAS Pipes proved to be the ideal solution. The old steel line was rehabilitated by the company Michel Bau GmbH & Co. KG utilizing 180 m HOBAS CC-GRP Pressure Pipes HOBAS CC-GRP Pipe DN 1200, PN 6 with a wall thickness of only 27 mm. The thin walls and excellent hydraulic properties of HOBAS Pipes resulted in absolutely no loss in flow rate despite the reduced diameter compared to the old steel line. In addition to the 180 meter long straight section, two 20 m long curved branches DN 900 that merge into the larger cross-section were installed by open trench. Once more, the broad range of HOBAS Fittings, that is easily adapted to individual customer requirements, proved to be highly advantageous. The final pressure test was completed successfully and on the first attempt.

Bremen's public utility was very satisfied with the result, particularly with the fast and simple installation of HOBAS Pipes and the professional project support by HOBAS experts.

Fmd: hobas.germany@hobas.com



Year of Construction

2008

Total Length of Pipe

200 m

Pressure Class

PN 6

Stiffness Class

SN 10000

Diameter

DN 900, 1200

Installation Method

Relining | open trench

Application

WaterLine®

Client

Stadtwerke Bremen

Contractor

Michel Bau GmbH & Co. KG

Advantages

easy installation, excellent flow properties thanks to the smooth inner pipe surface, corrosion resistance, broad range of fittings