

HOBAS Poland won the award “HOBAS Project of the Year 2001”

At the HOBAS Conference in Prague, which took place in September 2002, the Polish project “Zielona Góra” was awarded “HOBAS Project of the Year 2001”. The first curved pipe jacking project in Poland convinced the members of the jury most. The eight submitted projects were evaluated on a range of criteria covering fields like project scope, technical challenge, competition and popularity.

The project “Zielona Góra” included 1149 meters of HOBAS CC-GRP Sewer Pipe Systems of DE 1099 and 1229 and SN 128000 with a rectilinear and two curved sections with a radius of 350 m and 175 m.



In case of rectilinear microtunneling the compressive force is distributed evenly on the entire pipe. The challenge of this curved pipe jacking project was the fact that in the case of angular deflections at pipe connections the compressive force is not applied centrally to the pipe cross-section but acts eccentrically. This fact may result in exceeding the allowable stress, and consequently in pipe damage.



In order to select the right stiffness parameters of the pipes, a number of analyses must be performed beforehand.

According to the analyses, HOBAS CC-GRP Jacking Pipe Systems with a ring stiffness of 128000 N/mm² were selected. The allowable jacking force for such pipes for rectilinear microtunneling was 4660 kN, while for the curved section a jacking force of 3000 kN was allowed. Despite the curve, HOBAS CC-GRP Jacking Pipe Systems with their smooth outside surface could easily be jacked with only 3000 kN. For the curved section 1 m long pipes were selected, while the straight sections were made using 3 m long pipes. The total length of the section was 270 m, of which the final 115.5 m long section was made along a curve with a radius of 350 m. Despite the technical difficulty of curved jacking sections, the daily progress in laying the pipes was up to 8 lengths resulting in a total of 24 m.

Overview	
Year of Construction	2000 - 2001
Duration of Construction	Approx. 5 months
Length of Pipe	1149 m
Pressure Class	PN 1
Diameter	DN 1090 and DN 1229
Stiffness Class	SN 128000
Installation Method	Curvature jacking
Application	SewerLine®
Client	MPWiK Zielona Gora
Contractor	HYDROBUDOWA-9
Advantages	First Curvature Jacking Project in Poland, Relatively low jacking forces needed