

April 2011

# PipeLine

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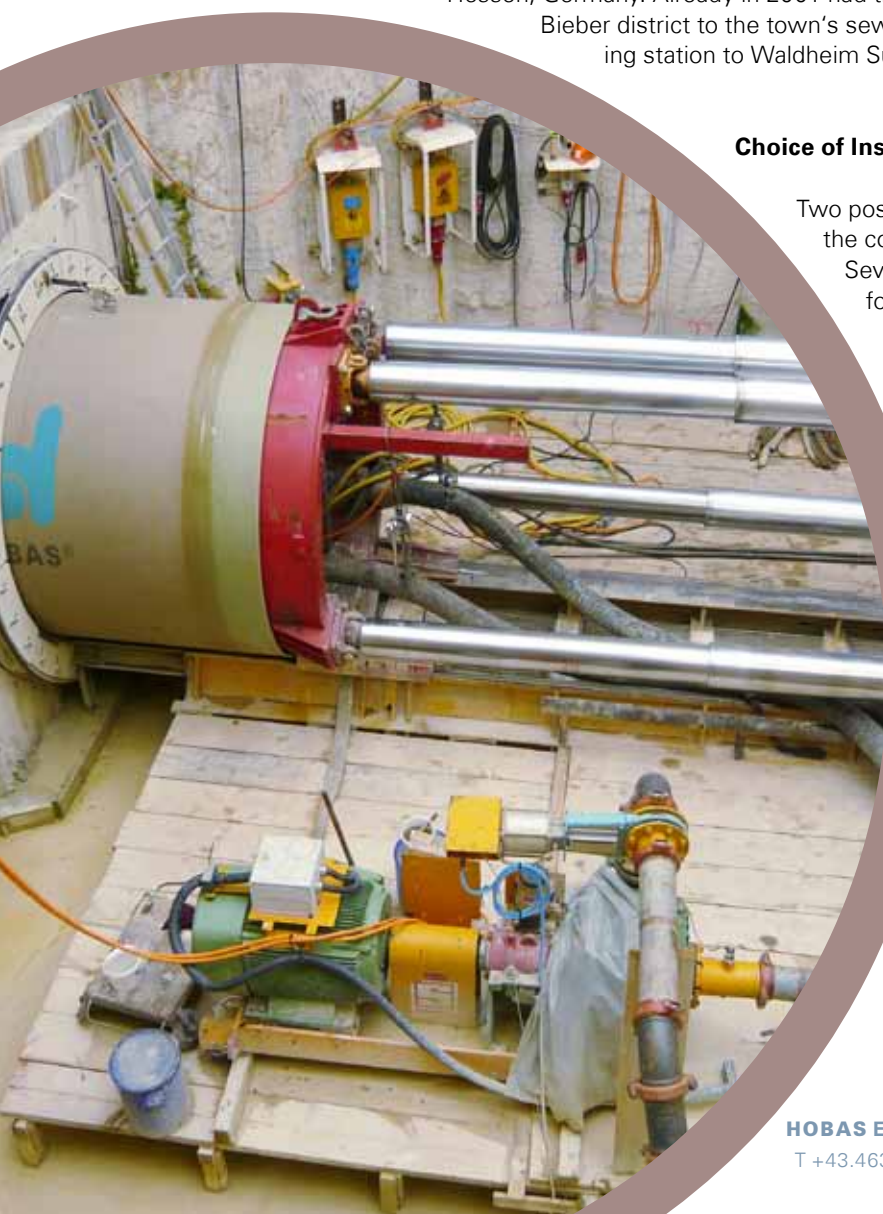
## Ecological and Economic Benefits with HOBAS® Jacking Pipe Systems Connecting Collector Offenbach, DE

Offenbach am Main counts approximately 120,000 inhabitants and is the fifth largest town in Hessen, Germany. Already in 2001 had the town looked into different options for connecting the Bieber district to the town's sewer system and had drawn up a route from Bieber pump-ing station to Waldheim Süd.

### Choice of Installation

Two possibilities came into question regarding the realization of the collector: open trench or trenchless installation by jacking. Several reasons spoke in favor of jacking as for instance a forest would have had to have been cleared and private properties as well as farmland would have been affected when opting for an open trench. Apart from this, the costly lowering of the groundwater table with its further impacts on the surrounding ecosystem could be avoided. And very much to the comfort of the inhabitants and environment, noise and emissions from the construction works, heavy transport as well as road diversions and traffic jams were kept to a minimum.

Although the tender that was published in July 2007 traditionally suggested the use of kite-shaped concrete profiles, HOBAS Germany convinced the contractor with a well-thought-out centrifugally cast GRP jacking pipe systems. The economic and ecological advantages were obvious: Thanks to the HOBAS Products' excellent hydraulic properties ( $k \leq 0.01$ ) there was no need for kite-profile pipes. The special proposal by HOBAS proved to be economically more attractive than the official suggestion for costs were considerably reduced by shorter installation times and by utilizing tangential shafts instead of cast-in-place concrete structures.



### Environmentally Friendly

The outstanding properties of HOBAS Products scored also ecologically: Compared to the intended concrete pipes, HOBAS Jacking Pipes have compact walls and therefore smaller outer diameters and less weight. There was no need for heavy load transports or large construction cranes. The smaller outer diameter of the CC-GRP Pipes created comparable little impact on the soil system during installation and led to 30-40 % less spoil to dispose of. A smaller jacking machine topped off the list of benefits for client and nature - costs as well as emissions were considerably reduced.

### Implementation

The approximately 1.6 km-long route was divided into three sections. The first was realized by the company WÜWA Bau GmbH & Co. KG; the company Sonntag Ingenieur GmbH installed the second. Apart from CC-GRP Jacking Pipes, HOBAS also supplied Tangential Shafts DN 2000/1000 and Bends DN 2000 for the thrust and receiving pits as well as Tangential Shaft Saddles. The last of the three sections is currently implemented with HOBAS Jacking Pipes D<sub>e</sub> 2160 – the inhabitants of the district will soon be able to rely on their new sewage system.

Fmd: [hobas.germany@hobas.com](mailto:hobas.germany@hobas.com)



Year of construction

**2007 – 2011**

Total length of pipeline

**1,593 m**

Diameter

**D<sub>e</sub> 2160**

Pressure class

**PN 1**

Stiffness class

**SN 40000**

Installation method

**Jacking**

Application

**SewerLine®**

Client

**ESO Eigenbetrieb**

**Town Offenbach**

Designer

**Dr. Pecher AG**

Constructor

**WÜWA Bau GmbH &**

**Co. KG, Firma Sonntag**

**Ingenieur GmbH**

Advantages

**Light weight, small outer diameter, environmentally friendly installation**

