

Groningen (NL) Sets on **HOBAS**® CC-GRP Pressure Jacking Pipes

Environmental aspects and future-oriented thinking lead the municipality of Groningen in the Netherlands to extending their existing sewer main sized DN 1000 and DN 1200. The gravity sewer main could not cope with high flow rates occurring during e.g. heavy rainfall. To prevent sewage from overflowing and polluting nature the authorities decided to convert it into a closed pressure system. With this and its extension by 2.4 km HOBAS CC-GRP Sewer Systems a capacity of 3000 m³/h will be achieved so that the line would easily cope with future needs as well as the connection of a further village.

Preparations for the project were made in 2004. Since the line crosses a busy part of the town Groningen HOBAS proposed the utilization of CC-GRP Pressure Pipe Systems which can be installed by open as well as trenchless construction. Being the only supplier of GRP pressure pipes which can also be jacked the local engineers decided for HOBAS CC-GRP placing an order worth 1,222,000 Euros for the complete line. This included 5 jacking sections with HOBAS CC-GRP Jacking Pipes DN 1000 to 1500 and Pressure Pipes DN 1000 and 1600 m DN 1200 as well as flanges, elbows, reducers and tees with stainless steel locked joints. Five different contractors were assigned to complete the job and a sixth will rehabilitate the pumping station in two years.

Several obstacles along the pipe route, such as roads and a channel, were overcome by microtunneling. Due to the requirements by the road authorities two jacking sections running beneath the

Year of Construction

2006-2007

Length of Pipe

2.4 km

Pressure Class

PN 1 and 6

Stiffness Class

SN 5000, 320000

Diameter

DN 1000 - 1500

Installation Method

open cut, jacking

Application

SewerLine®

Client

Municipality Groningen

Contractor

5 different constructors

Advantages

unique GRP pressure jacking, corrosion resistance, light weight, complete pressure system by one manufacturer, long lifetime, low maintenance costs



highway were realized with covering pipes which were also delivered by HOBAS Benelux, the HOBAS CC-GRP Pressure Pipes were consequently inserted. The largest with an outer diameter of 1500 mm was utilized beneath highway A7.

The three other microtunneling sections were implemented with in this field unique CC-GRP pressure jacking pipes PN 6 and flush FWC couplings. These run beneath a gas pipeline, a main road, several streets and a navigable channel where the installation was conducted in 12 m depth.

A 275 m long section with CC-GRP pressure jacking pipes of 1280 mm outer diameter was jacked in a curve radius of 1300 m. The contractor decided to install an intermediate station which according to safety standards is required for jacking with over 4000 kN. Due to the smooth and non-absorbing outer surface of HOBAS Pipes their light weight and constant outer diameter, the maximal jacking force did not exceed 1800 kN. The intermediate station was therefore never in operation.

Thanks to innovative HOBAS CC-GRP Pipe Systems and the constant support of HOBAS Experts, all involved parties look back to a smooth and unobstructed implementation, Groningen is prepared for future needs and Mother Nature can breathe a sigh of relief.

Fmd: hobas.benelux@hobas.com

