

DUCTILE IRON PIPE SYSTEM

Information from the European Association for Ductile Iron Pipe Systems · EADIPS



Editorial

Dear readers,

In the April issue of the Newsletter there are reports on the laying of pipes in rocky topography in Switzerland and on two pipelines installed by trenchless techniques (by burst lining in South Tyrol and by driving with a steered pilot bore in Berlin). They show the European context in which the ductile iron pipe system is completely at home.

I hope you will find them an interesting read.
Sincerely yours,

Raimund Moisa



A technically demanding pipeline installation

On 11 February 2009, a recognised specialist in water pipeline installation, the Gebr. Hersperger AG company of Meilen, completed a pipeline project that was unusually demanding in technical terms for the municipality of Männedorf on the northern shore of Lake Zurich.

◆ A DN 400 connecting pipeline needed to be installed below a building site in rocky terrain. Added to this there were some marked changes in level and an angled route followed by the pipeline. Part of the pipeline had to be connected up in a concrete duct which meant that the work could only be done by hand and in a stooped position.

The building ground, the topography and the route meant that a standardised method of pipe connection could not be used and set some very demanding requirements for the pipes used. There are only a few pipe systems which are capable of meeting such a difficult specification.

The polyurethane-coated ductile iron pipe manufactured in Switzerland with a built-in rock-shielding material is one that has these "exceptional properties". The unrivalled ruggedness of these fully protected pipes with a polyurethane coating to EN 15189 is well known. Other factors that were crucial to the success of the Männedorf project were the weight advantage that polyurethane-coated ductile iron pipes have and the fact that the pipes could be connected easily and reliably with both the internal and the external *vonRoll* thrust resisting systems.



Special pipes for a trenchless burrow through Berlin's Müggel Hills

In the south-eastern part of Berlin, in the well-known recreational area around the Müggelsee lake, the water supplier Berliner Wasserbetriebe needed to install a new pressure pipeline for sewage. Because of traffic requirements and other criteria that had to be respected, the planners decided to use a technique for the trenchless laying of new pipelines for this double pipeline.



◆ The pipes installed were DN 250 ductile iron sewer pipes to DIN EN 598 with restrained socket joints and a cement mortar coating. Following a call for tenders, the client opted for the well-tried TYTON® BLS® push-in joint to enable high tractive forces to be transmitted. Also, a special process was used to allow the thickness of the layer of cement mortar coating on the body of the pipe to be increased sufficiently for the socket on the pipe to disappear within a cylindrical outline shape. Ductile iron pipes of this kind

with a cylindrical coating have already been tried out in a variety of nominal sizes on a number of installation projects.

A steered pilot bore having been made, 1 m long DN 200 restrained auxiliary tubes of steel were driven with the spoil being fed out backwards. The next step was then for the coupled steel tubes to be drawn back to the "machine trench".

To the rear of the last steel pipe and ahead of the ductile iron pipes which were pulled in behind it there was an upsizing head from which the spoil was fed backwards. The exact sizing thereby achieved enabled the oversize cut to remain extremely small; bentonite was fed in as a lubricant to reduce the skin friction.

A first burst lining site using ductile iron pipes in South Tyrol

The Stadtwerke Brixen AG water supply company in South Tyrol is playing a pioneering role in northern Italy. It is the first water supplier in the region to use the burst lining technique for the replacement of an old water pipeline.

the abutting owners took a lively interest in the work. The time scheduled for all the installation work was two days and it was met without any problems. People were able to walk through the pedestrian zone during the entire period and none of the beautiful premises in Brixen's old town found that there was any interference with their business.

DATES FOR YOUR DIARY

4-5 May 2010 7th Sewer-Laying Conference, joint event held by the DWA [German Association for Water, Wastewater a. Waste], Celle

16-19 June 2010

Hydroenergia 2010

Lausanne, Switzerland

13-17 September 2010

IFAT, Munich, Germany

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◆ 60 m of a more than 100 year old grey cast iron pipeline (of 1904) has been burst-lined in a single run by the static burst lining technique by a Groundoburst 400 G machine made by the Tracto Technik company.

What were pulled in were DN 150 ductile iron pipes with BLS® restrained push-in joints and a cement mortar coating to EN 15542. The maximum tractive force permitted by the joints of these pipes is 280 kN but the highest force measured in practice was one of 170 kN. It was measured on-line by the Tracto Technik company's Groundolog.

The work was done in the centre of the old-town part of Brixen and passers-by and

