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NEWS
DUCTILE IRON PIPE SYSTEM

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

Editorial

Dear readers,
In this April 2011 issue of the Newsletter, I would like to tell you about some pipeline projects where safety, security and reliability had an important part to play. This may have been the safety of the installation technique used, such as the HDD technique, or it may have been the safety and security with which drinking water is supplied, sewage is taken away, or fire-extinguishing water is supplied in a tunnel.
There is then a final report on an improvement in the reliability of snow on the Feldberg mountain in the Black Forest. All these projects were carried out with ductile iron pipe systems.
Have an enjoyable and stimulating read,

Sincerely yours, Raimund Moisa

The HDD technique with pipe-by-pipe connection

In Berlin Charlottenburg, a new DN 700 pipeline for raw water has been installed along the footway beside the river Havel in the Schildhorn area. The topographic conditions – the pipeline had to cross below a 17 m high hill for a length of 480 m – meant that installation had to be trenchless by the HDD technique.

◆ The client, Berlin's water supply utility Berliner Wasserbetriebe, opted for ductile cast iron pipes of wall-thickness class K 10 with BLS® restrained joints. External protection took the form of the rugged cement mortar coating to EN 15542. The joint region was protected with shrink-on sleeves and sheet-metal cones. A steel ramp was built specially for the pipe-by-pipe connection. Once the drilled bore had been widened to 1,300 mm and there had been a successful test run with a DN 800 calibrating body, the DN 700 ductile iron pipes were connected and pulled in as a continuous process within 34 hours. The pipe string was partly filled with water to stop it from being buoyant. The tractive force measured was 35 t – no problem for the 100 t drilling rig. The tractive force used was no more than about 22 % of the allowable level.

A pipeline for raw water for Brixen

◆ The Gruberwiesenquelle spring in the Schalderertal valley, high above the Vahrn district of the town of Brixen, was already supplying the population with drinking water in the 19th century. The water intake structure is a tunnel which was dug in about 1890. The existing systems forming the pipeline from the spring no longer came up to present-day requirements. The supply company, Stadtwerke Brixen AG, placed a contract for a 1,500 m long section of the pipeline to be replaced. One pipeline of ductile iron pipes has replaced two old pipelines. Because of the difficult topographic conditions in Alpine terrain, this pipeline for raw water was laid with restrained BLS®/VRS®-T push-in joints. The water from the spring is very soft and dissolves lime and for this reason the pipes were lined with high-alumina cement mortar. Their laying length is 5 m to allow tight radiuses to be followed along the route without the need for fittings. The installation work began in the autumn of 2010 and the first 15 m of the run were laid in DN 400 pipes and the rest in DN 300 pipes.

Pipelines for drainage and fire-extinguishing water in the Schönthal tunnel

◆ In Switzerland, traffic from the Ergolztal valley and the two Frenkental valleys is being fed onto the A 2 national highway via a new, 4.5 km long, two-lane main highway running from Pratteln to Liestal. With a total length of about 2.4 km, the Schönthal tunnel is the principal piece of construction work on this new bypass. The pipelines for drainage and fire-extinguishing water for the "Schönthal Tunnel" project are being laid in ductile iron pipes with a polyurethane lining to EN 15655 and the tried and tested push-in joint which is part of the vonRoll-*ecosys* system. For the pipeline for fire-extinguishing water in the tunnel, DN 200 vonRoll-*ecopur* fully protected pipes with a reinforced coating to EN 545 are being installed, as are the same pipes of DN 150 nominal size for the pipelines to the hydrants.
For the drainage of the highway, vonRoll*geopur* wastewater pipes with a zinc coating and a bitumen finishing layer are being used, of DN 400 size for the main pipeline and of DN 250 size for the transverse pipelines from the drainage inlets from the carriageway. The new bypass from Pratteln to Liestal is due to be completed by December 2013.

A safe sewer installed with ductile iron pipes

◆ The drainage department of the utility Stadtwerke Ostfildern was planning to install a new wastewater sewer in the Parksiedlung Ostfildern housing estate on the northern edge of the town of Ostfildern in Baden-Württemberg. Some crucial constraints affecting the pipe material selected were:

- the sloping ground,
- the limited amount of space available on the installation site, and
- the difficult soil.

600 m of DN 600 nominal size ductile iron sewer pipes with a zinc coating and an epoxy finishing layer on the outside were installed as were 550 m of DN 300 size pipes of the same type, all with the tried and trusted BLS® push-in joint. The conditions for installation were a real challenge and the very reliable operation and the easy assembly of the BLS® restrained push-in joint were essential requirements for economical installation of the wastewater pipeline and for its safe operation in the long term. At the beginning of the operation, the manufacturer of the ductile iron pipes ran an instruction course on how to connect the sewer pipes for the installing company, Moll, of Gruibingen and though the schedule for installation was a tight one this enabled it to be met without any difficulty.

DATES FOR YOUR DIARY

02–05 May 2011
WASSER BERLIN INTERNATIONAL 2011, Berlin

17–18 May 2011
8. Kanalbautage 2011 [8th Sewer Construction and Installation Conference 2011], Heidelberg

25-26 May 2011
Convention and Trade Fair "Gas Water" 121th ÖVGW (Austrian Association for Gas and Water) Annual Convention, Vienna

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Reliable snow on the Feldberg mountain

To improve the reliability of snow for the ski resort on the Feldberg mountain in the Black Forest, the ski slope operators Feldberg Liftverbund are investing in snow-making systems. The client and the engineering consultants, Klenkhart & Partner Consulting ZT Gesellschaft m.b.H. of Absam in the Tyrol opted for some 3.5 km of DN 80 to DN 250 ductile iron pipes with the tried and trusted BLS®/VRS®-T push-in joint. The installing company, GEO-ALPINBAU GmbH of Imst, had a time slot of only about eight weeks for the installation. With tight constraints like this, it is important to use a pipe joint system right for safe, swift and smooth assembly. Work on the snow-making systems was completed on time for the start of the season.