



Editorial

Dear Readers,

In this November 2015 issue of the Newsletter I am reporting on the relocation of a water pipeline in the area of a new tunnel. Other contributions provide information on the replacement of water pipelines. There is an article on a small hydro-power plant where ductile iron pipes with optimised structural fracture-mechanics make a considerable contribution to the production of energy from renewable sources.

Have an enjoyable and stimulating read.

Sincerely yours,

Raimund Moisa



Challenging pipeline route along the Wislen tunnel in Worb, Switzerland

◆ In the context of a traffic improvement plan for the municipality of Worb, the Canton of Bern is building a new bypass to cope with the heavy traffic in this suburban area. The Wislen tunnel has been constructed using the cut and cover technique and is the main structure of the “Spange Süd” phase of the project. This ambitious construction project includes access roads with integrated recesses in engineering structures (bridge for the regional Bern-Solothurn railway, retaining walls) with elaborate pit support systems, a roundabout structure (Rubigenstraße) as well as the relocation of numerous utility lines. During the course of the entire road project a new channel was created parallel to the tunnel for the Worblebach river as a means of flood protection for the communities of Richigen and Worb. The new main supply line from the Wislenberg reservoir was deliberately planned by the engineers in charge as a DN 400 vonRoll ECOPUR pipeline, wall thickness class K 9, with integral lining and coating in polyurethane (PUR) to EN 15655 and EN 15189. The singular characteristics of the vonRoll system selected with its flexible HYDROTIGHT restrained push-in joints, Fig. 2806, makes precise positioning of the new supply line above the route of the tunnel possible.

Construction of a water transport line between Ransbach and Baumbach

◆ The Ransbach-Baumbach utility association is replacing a 60 year-old drinking water line which supplies large areas of the district of Ransbach-Baumbach with drinking water. In the vicinity of tennis courts and a swimming pool, the piping network has been extended by 3,200 m, of which around 1,500 m has been designed as a double line. DN 100 to DN 200, K 10 ductile iron pipes with BRS® friction-locking push-in

joints are to be installed. Zink-Plus has been selected as the external protection with an allowable operating pressure (PFA) of 10 bars. Even before the beginning of the work the construction company – Paul Heibel Tief- und Straßenbau GmbH from Herschbach – placed great emphasis on co-operation with the pipe manufacturer. The application engineers from the pipe manufacturing company provided the

construction site personnel with theoretical and practical training in the techniques of installing ductile iron pipes, focussing on the different types of joint technology of pipes and fittings in ductile cast iron. Construction work was started in May 2015 and is expected to be completed to deadline in November 2015.



Sustainably superior –
ductile iron pipe systems

Power plant at Kanzingbach in the Tyrol produces three times as much power – use of cast iron pipe system with optimised structural fracture-mechanics



◆ In 11 June celebration was the order of the day in the Flaurling valley in the Tyrol. With the ceremonial commissioning of the new Kanzingbach small power plant the TIWAG – Tiroler Wasserkraft AG – crossed yet another milestone in the use of its own renewable energy sources. The new high-pressure plant is a modern single-stage solution which replaces two ageing small hydropower plants dating back to 1905 and 1962. Around 12.5 million euros were invested by the Tyrolean energy supply company in the construction of the plant. With a gross head of 573 m

and a standard capacity of 16.4 GWh per year, the plant is today producing more than three times as much clean power as the two old plants put together. The new power station shines out not only because of its solid planning concept but also because of its state-of-the-art power plant technology. In fact, for the DN 600 ductile cast iron penstock, a special new material was developed which raises the “leak-before-break” concept to a new standard.

EADIPS®/FGR® Annual Journal 50 (2016) will contain a detailed report on this.

Replacement of a water transport line

◆ The Neuwied district waterworks decided to replace an old DN 150 water pipe-

line which supplies the upper area of the town of Linz am Rhein as well as the district of Ockenfels and parts of Kasbach-Ohlenberg with drinking water. Because of the pressures in the valley location of Linz am Rhein, ductile iron pipes of pressure rating PN 40 were provided for the new line.



Over a length of about 1,600 m the old line is being replaced with pipes in ductile cast iron, DN 200, wall thickness class K 9, with cement mortar coating and BLS® restrained push-in joints.

The route of the new water transport line runs from the road to the forester's house at Niederee through various areas of woodland and along forest roads and cart tracks. Installation difficulties were presented by two steep sections of around 180 m and 150 m in length which demanded a great deal of effort

from the construction company carrying out the work. Also, the existing pressure reducing station on Asbacher Straße in Linz am Rhein had to be reconnected and the Sternerbach stream had to be crossed. For the crossing, in addition to the bridge construction, a steel protective casing was installed through which the new pre-insulated water transport line was pulled in. Directly behind the stream crossing the new pipe was connected up to the existing water transport line.

Dates for your diary

13–15 January 2016

InfraTech 2016,
Essen

11–12 February 2016

30th Oldenburg Pipeline Forum,
Oldenburg

14–15 March 2016

Cast Iron Pipe Systems Congress 2016,
Vienna

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(FGR®) e. V.

Im Leuschnerpark 4

64347 Griesheim/Germany

Phone: +49 (0)61 55/60 52 25

Telefax: +49 (0)61 55/60 52 26

E-mail: info@eadips.org

www.eadips.org

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