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NEWS

DUCTILE IRON PIPE SYSTEMS

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

## Editorial

Dear Readers,

In this November 2014 issue of the Newsletter I am reporting on some different applications for ductile iron pipe systems. We have a drinking water pipeline installed in a collector system, a penstock pipeline constructed in Romania and a new transport pipeline built to secure a much-needed supply of drinking and extinguishing water.

And there is a story of ductile sewer pipes being used for a static pipeline as part of a private initiative.

Have an enjoyable and stimulating read

Sincerely yours,

Raimund Moisa

## Installation in a collector system in Frankfurt/Oder

**Underground collector systems enable all utility lines to be accessible in one place for ease of maintenance. They were used in complex housing developments in the seventies and eighties in the form of reinforced concrete tunnels.**

◆ The water and wastewater utility company in Frankfurt/Oder (Frankfurter Wasser- und Abwassergesellschaft mbH) made the decision to replace the ailing steel pipelines in a collector system (height 3 m, width 2 m) with ductile iron pipes with cement mortar lining and restrained joints. In addition to 2 strings of DN 80 and DN 100 pipe, 60 m of DN 200 and 54 m of DN 150 were also installed in the 1st construction stage. In order to achieve the highest possible degree of security, positive locking BLS® restrained joints were provided to absorb the forces. In the cast-on retaining chamber there are 3 locks and a catch which are engaged via an opening in the socket once the pipes have been put together. The locks are supported on a welded bead on the spigot end of the next pipe. The joint, with an allowable operating pressure of PFA 42, is capable of angular deflection. The system is completed by a full range of BLS® fittings. Despite the cramped conditions, the parts were quickly and easily assembled once the old steel pipeline had been dismantled. After being instructed by the pipe manufacturer's technical field service, the local construction company was also easily able to apply the necessary welded beads to the individual fitting elements cut to size on site.

## Weingarten water wheel – turning energy around

◆ It is now more than 1,000 years since people started to channel the Stiller Bach in Weingarten. What the monks began all those years ago was finally completed in 2013 by the energy association of the people of Weingarten (BEG) with the construction of a water wheel. The water wheel has a diameter of 5.5 m and is 1.25 m wide. The amount invested of about 100,000 euros is offset by an annual energy output of around 65,000 kWh. The construction of the DN 500 piping system was supported right from the planning stage by the technical field service of the pipe supplier. Something of the sporting instinct also played a part in this story: the constructors invested 1,000 hours of voluntary work into the project. Also, active support was provided for the installation of 30 m DN 500 ductile sewer pipes for the static pipeline with the associated riser by employees from Duktus Rohrsysteme Wetzlar GmbH.

## Hydroelectric power station in Romania

◆ The Calinesti hydroelectric power station project is located in the Southern Carpathians, in the Calinesti valley on a tributary of the River Olt between the towns of Sibiu/Hermannstadt and Râmnicu Vâlcea. The project as a whole consists of the two power stations, Calinesti 1 and Calinesti 2, with a combined bottleneck output of 1.4 MW and an annual production of 4.8 GWh. The client for the Calinesti hydroelectric power station project is WIEN ENERGIE GmbH. The strengths of the Romanian hydropower market lie in its high and as yet unused potential, above all in the Carpathians. The available potential for small hydropower plants is relatively little used and there are still many locations of interest. Romania has a long tradition of medium-sized and large hydroelectric power stations. Around 35 % of the electricity generated in Romania already comes from hydropower. The upstream power station Calinesti 1 has a gross head of 290 m and a discharge rate of 420 l/s. In the technically challenging upper part, which is located in a steep and rocky ravine, the piping section has been equipped with proven DN 600 ductile iron pipes (max. operating pressure 14 bar) with restrained BLS® push-in joints. WIEN ENERGIE GmbH expressed its entire satisfaction with the excellent service of the pipe supplier. Its services ranged from consultation and training right through to logistics management.

## Securing the drinking and extinguishing water supply between Moutier and Delémont

◆ In order to meet requirements for the supply of drinking water and extinguishing water, a new transport pipeline has been constructed between Moutier in the Bernese Jura and Delémont, the capital of the canton of Jura in Switzerland. Some 1,500 m of ductile DN 200 vonRoll ECOPUR iron pipes of wall thickness class K 9 were used for the construction of the new transport pipeline. In order to ensure optimum corrosion protection the vonRoll ECOPUR full-protection ductile cast iron pipes were fully coated inside and out with polyurethane. The pressure pipes are durably resistant to wet and aggressive soils and to all types of galvanic corrosion due to stray currents and the formation of macro elements. The pipes are protected with the tried and tested vonRoll HYDROTIGHT internal thrust resistance system with friction locking. The system is completed by vonRoll ECOFIT fittings with integral epoxy coating to EN 14901. The high points of the transport pipeline were equipped with aeration and ventilation valves. Drainage was installed at the low points. For convenience of operation, the air valves and drainage fittings were installed in concrete shafts.

### Dates for your diary

**03 December 2014**
POLLUTEC 2014
Lyon
10 am, EADIPS®/FGR® presentation
"Ductile cast iron creates value"/
"La fonte ductile – Créatrice de valeur ajoutée"

**16 January 2015**
Richter+Frenzel TBU Tiefbautag 2015
Nürnberg


### Imprint

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