



Editorial

Dear Readers,

In this July/August issue of the Newsletter I am reporting on the construction of a new turbine pipeline for a small hydropower plant in Austria, the laying of a new connecting pipeline between a village in Switzerland and a water reservoir plus the installation of a new thermally insulated drinking water pipeline for Frankfurt Airport's Terminal 1. All the projects involved the use of positive locking push-in joints. In addition there is some information for you on the updated Chapter 22 of our E-Book, "Trenchless installation of ductile iron pipes".

Have an enjoyable and stimulating read

Sincerely yours



Raimund Moisa

E-Book "Ductile iron pipe systems" – Use of ductile iron pipes for trenchless installation techniques



We have updated Chapter 22 – Use of ductile iron pipes for trenchless installation techniques – in our "Ductile iron pipe systems" E-Book!

You can open it online via the link [E-Book Chapter 22](#) and download it as a PDF. The chapter describes the historical development of the trenchless laying technique for ductile iron pipes. It also throws light on economic and ecological aspects from the point of view of sustainability. In particular it was the development of restrained push-in joints for ductile iron pipes which produced the breakthrough in this field.

It covers the following ductile iron pipe installation techniques:

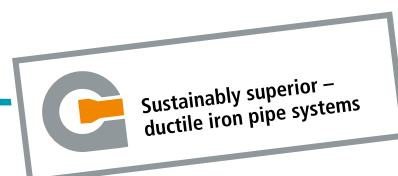
- Burst lining technique,
- Press/pull technique,
- Auxiliary pipe technique,
- Horizontal directional drilling technique,
- Cutting in,
- Ploughing in,
- Guided pilot boring and
- Relining technique.

Small hydropower plant in Stuben am Arlberg

◆ As from the middle of 2015, Stubenbach GmbH is building a small hydropower plant (nominal discharge capacity 420 l/s, bottleneck capacity 676 kW, standard capacity 2.2 GWh) along with the turbine pipeline required for this in Stuben, Austria. The owner, Illwerke/Stubenbach GmbH, opted for a 1,800 m long DN 500 pipeline in ductile iron pipes with VRS®-T restrained

push-in joints. Even in the top section of the pipeline, these pipes are quick and easy to assemble in extremely steep and rocky terrain. The operating pressure of the pipeline is 20.5 bar and the pipes are protected with PUR Longlife coating and a cement mortar lining. Most of the pipeline runs through open land; up to 70 m a day could be laid, which meant that close col-

laboration between the client, the construction company, planning engineers and the pipe supplier was an essential condition. Once again pipe manufacturer TRM delivered a high quality iron pipe system for the turbine pipeline of the Stuben hydropower plant which meets all the requirements set for it.





A new transport pipeline for a new reservoir in Tägerig

◆ In the municipality of Tägerig in the Swiss Canton of Aargau, the newly constructed reservoir sits majestically above the village. The construction of the new reservoir meant that the existing grey cast iron drinking water transport pipeline also had to be replaced by a new pipeline in ductile cast iron.

The new transport pipeline first runs from the reservoir through a protected forest zone, then it crosses agricultural land and finally passes through neighbourhood streets with restricted space conditions into the centre of the village. Because of these changing installation situations with different subsoil conditions and a variety of soil

types, the choice fell to ductile cast iron as the pipe material. Swiss-produced ductile iron pipes with integral polyurethane (PUR) coating were installed, which are suitable for use in all soil types according to EN 545.

In total, 700 m of vonRoll ECO-PUR DN 250 full protection pipes with non-porous PUR internal and external protection to EN 15655/EN 15189 and flexible vonRoll HYDRO-TIGHT push-in joints were used for the construction of the new drinking water transport pipeline. Internal thrust resistance for the entire pipeline was secured with restrained joints.

DN 300 insulated pipeline for Terminal 1 of Frankfurt Airport

◆ Over a length of more than 500 m, Fraport AG from Frankfurt has had DN 300 thermally insulated cast iron pipes

installed for water supply and fire extinguishing purposes in the access area of Terminal 1. The piping system consists of K 9, PN 16 pipes and double socket bends in ductile cast iron to EN 545 with BLS® push-in joints. The pipes and fittings are coated with a thermal insulation of CFC-free polyurethane (PUR hard foam) with an average total density of 80 kg/m³. They are protected from external influences by a spiral casing pipe in galvanised sheet steel. The gap in the area of the push-in joint is filled by a soft polyethylene ring and covered by a hot-galvanised sheet metal collar. High-grade steel clamps retain the pipeline on the underside of the ceiling. Slide bearings ensure the necessary freedom of movement. The assembly height was the greatest challenge. Using a lifting platform



especially converted for this application the pipes were lifted up and installed. The longest thermally insulated cast iron pipeline delivered to date by the pipe manufacturer was completed with an average installation rate of 6 pipes a night.

Dates for your diary

21 July 2015

7th EADIPS®/FGR® Information Day, Frankfurt am Main

17–19 September 2015

30th BWK Federal Congress, Jena

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