



Editorial

Dear Readers,

I am pleased to announce today's edition of the newsletter on the newly designed website of EADIPS FGR. A convenient navigation is now possible with laptops, desktops, tablets and smartphones. But we also adapted the design of the newsletters. The articles are now presented in a new form and can be read online. However, you can also download the newsletter as a PDF document as usual.

You will find practical tips for using ductile cast-iron pipe systems for temporary sewage pipelines installed above ground, in unstable soils (such as slopes) and for pipes, fittings and valves used for drinking water supply in the articles of this newsletter. The articles illustrate the fact that the push-in joints of ductile cast iron pipe systems are often advantageous compared to welded pipe connections. Building contractors and the operators prefer the installation which is independent of the weather, their easy installation and disassembly and pipe connections that are highly resilient.

Have an enjoyable and stimulating read

Sincerely yours

Christoph Bennerscheidt



Portable line near Berlin Tegel Airport



Course of the portable line along a forest road

Portable line at Berlin Tegel Airport

BLS makes it possible

In the vicinity of Berlin Tegel Airport, Berliner Wasserbetriebe (BWB) is planning to renovate a DN 1000 sewage pressure pipeline. During the construction phase the section of pipeline will be taken out of operation and additional measures will have to be temporarily implemented to take care of the drainage requirements. Berliner Wasserbetriebe has decided to route the wastewater above ground through an interim pipeline.

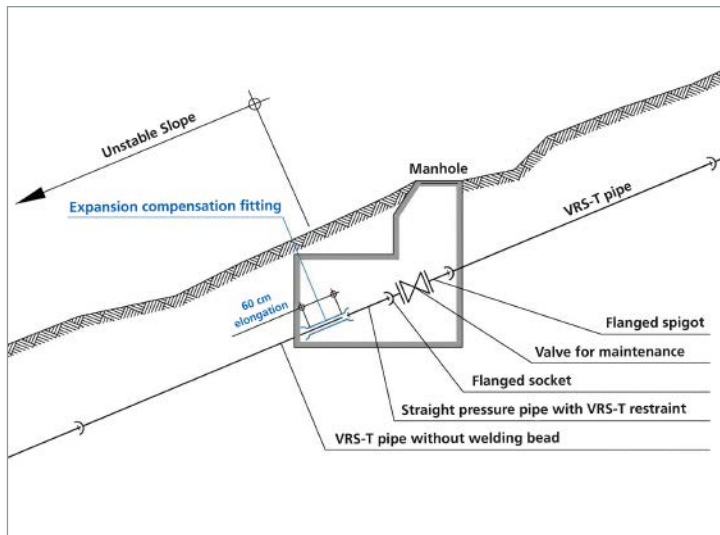
◆ When choosing a suitable piping system, the emphasis was placed on uncomplicated, fast and secure assembly and removal of the 1,188 m long pipeline in the first construction section and this was taken into account when calculating costs. The decision went in favour of robust DN 800 ductile iron pipes with high-alumina cement mortar lining which are easy to handle with their 6.00 m lengths and are connected together with restrained BLS® push-in joints which do not involve any welding work. With the BLS® push-in joint, locking against longitudinal forces is achieved by cast iron segments which are pushed into the thrust resistance chamber of the socket and rest against a circumferential welding bead at the spigot end of the pipe. The rounded design of the thrust resistant chamber means that each joint of the DN 800 sewage pressure pipeline has an angular deflection capability of up to 1.5° under full pressure loading. Once the pipe joint has been put together, the cast iron segments are each inserted into the socket windows arranged around the entire circumference in the crown of the pipe. Particularly important is the subsequent "stretching" of the joint to lock the segments and the additional securing of the segments by means of a clamping strap. The sewage pressure pipeline is then ready for operation straight away. Once the construction work is finished, the interim line will be dismantled again. The pipeline will be drained, the thrust resistance segments will be removed and the pipes will be pulled apart. They will then be able to be used again at another location without problem.

In summary, BLS® stands for:

Bewährtes Material – Tried and tested material

Leichte Montage und Demontage – Ease of assembly and dismantling

Sichere Verbindung – Secure pipe connection



On the left: Manhole above the slope with expansion compensation and other construction details consisting of a straight pressure pipe with two welding beads, a flanged socket, a flanged valve for maintenance and a flanged spigot for the connection of ductile iron pipes with BLS®/VRS®-T push-in joints. **On the right:** Manhole with fittings and valve

Expansion equalisation on slippery slopes

Ski resort Ehrwalder Alm (Austrian, Tyrol)

◆ In the Ehrwalder Alm ski resort (Austrian Tyrol) various development and extension projects are currently underway. Firstly, the pistes are being extended and consolidated. And secondly the snowmaking equipment is being upgraded with ductile iron pipelines and the well-proven BLS®/VRS®-T restrained joint from the Tiroler Rohre GmbH.

The particular feature of this project is the fact that part of the system of snowmaking pipelines lies in a fault zone. This refers to a slope which is subject to constant movement. In the sections affected, the two parallel snowmaking lines can move with the hillside between two fixed supports, which means that damage to them can be avoided. The pair of fixed supports are located in accessible concrete manholes.

At the transition to the longitudinally flexible section of pipeline in the sliding slope area, so-called “expansion compensation” fittings are used. Basically, the expansion compensation fittings resemble standard collars (a flanged socket with two BLS®/VRS®-T push-in joints), but they also have an important difference: the expansion compensation fittings can offset longitudinal expansions of up to 600 mm. In order to ensure a defined direction of movement of the spigot end in the expansion compensation fittings, on one side the two spigot ends at the extremity of the relevant piping section remain longitudinally adjustable without locking.

On the other side the expansion compensation fittings are locked against longitudinal forces with BLS®/VRS®-T push-in joints on both the upward and downward extending sections of pipeline.

As usual, between the two manholes there are pipes and fittings in ductile cast iron with restrained BLS®/VRS®-T push-in joints. In addition, for maintenance and repair work, gate valves are inserted before the expansion compensation fittings in each case and these are marked for the purpose of checking length changes in the pipes used in the expansion compensation fittings.

The expansion compensation fittings are currently produced in steel as special components. As demand increases, production using the sand-casting process is planned.



Assembly of a ductile iron pipe vonRoll ECOPUR



vonRoll ECOPUR ductile iron pipes, vonRoll ECOFIT fittings and vonRoll shut-off valves

Rerouting of a drinking water pipeline

Grey cast iron pipelines in a groundwater protection zone replaced

◆ The municipality of Fehraltorf is a suburb of the Swiss cities of Zürich and Winterthur. Together with the supply of water to the adjacent districts of Illnau-Effretikon and Russikon, water

for Fehraltorf is supplied by Gesellschaft Gruppenwasserversorgung FIR. Its tasks include the operation, maintenance, renewal and extension of the equipment used jointly by these districts for groundwater extraction at the Barmatt groundwater pumping station in Fehraltorf, which supplies drinking water to the whole of the area.

In the process of adapting the drinking water equipment to the currently applicable standards and specifications, the pumps at the Barmatt groundwater pumping station which date back to the 1950s and 1960s have been replaced. At the same time, it was necessary to adapt the route of the existing drinking water pipelines to the new directives. To this end, the 50–60 year-old grey cast iron pipelines which ran through groundwater protection zones 1, 2 and 3 were decommissioned and replaced by new vonRoll ECOPUR ductile iron pipes with integral

internal lining and external coating with polyurethane (PUR) to EN 545 and HYDROTIGHT restrained push-in joints. The new pipelines now take the shortest route out of the groundwater protection zones.

In total 110 m of ductile iron pipes, type ECOPUR DN 200, class C 64 and 675 m ductile iron pipes, type ECOPUR DN 250, class C 50 have been installed and, where necessary, additionally protected against mechanical loads with ROCK rock-protection material where grain sizes are greater than 63 mm.

The system was completed with vonRoll ECOFIT fittings and vonRoll isolation valves with integral epoxy coating to GSK/RAL-GZ 662.

Dates for your diary

16–17 November 2016

IAB Wissenschaftstage 2016,
Weimar

Lecture:

Bennerscheidt, C.

Vom Rohr-Boden- zum Boden-Rohr-System:
Lösungen mit duktilen Guss-Rohrsystemen

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European Association for Ductile
Iron Pipe Systems

Fachgemeinschaft Guss-Rohrsysteme e.V.
Doncaster-Platz 5

45699 Herten/Germany

Phone: +49 (0)23 66/99 43 905

Fax: +49 (0)23 66/99 43 906

E-mail: info@eadips.org

www.eadips.org

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Publications



Website

The clearly structured online presence contains multilingual information about the missions, the aims and the members of EADIPS®/FGR®, as well as the dates of forthcoming events, technical publications, EADIPS®/FGR® standards and useful apps such as calculation tools and a standards database.

Manual

The E-Book “Ductile iron pipe systems” provides planning engineers, users and instructors with comprehensive technical knowledge about ductile iron pipe systems – pipes, fittings and valves.



Annual Journal

With expert contributions and informative photos and illustrations, the annual journal documents sustainable and universal technical possibilities for the use of ductile iron pipe systems.

