

NEWS

DUCTILE IRON PIPE SYSTEM

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



Editorial

Dear readers,

May I wish you a happy, healthy and successful 2011!

This January 2011 issue of the Newsletter looks at pipeline projects with a focus on the contribution that ductile iron pipe systems can make to sustainability under the three pillar model, i.e. environmental, economic and social sustainability.

Have an enjoyable and stimulating read.

Sincerely yours,

Raimund Moisa



Heat recovery with ductile iron pipes

In Rebstein, in the part of the Rhine valley in Switzerland known as St. Galler Rheintal, an energy-plus building has recently been completed. The building is heated by "Komfort" ducted ventilation, which includes facilities for heat recovery. The hot water is heated by the heat from sewage.

◆ The owner is taking advantage of the good thermal conductivity of ductile iron pipes, and of the minimal frictional flow resistance offered by the polyurethane (PUR) lining of *geopur* sewer pipes, to obtain energy. The collector of geothermal heat for the "Komfort" ducted ventilation system consists of 26 m of *geopur* type ductile iron pipes of a nominal size of DN 200 installed below the garage entrance and the outside parking space. The sewage pipe running to the manhole connecting it to the municipality's main sewer also consists of *geopur* ductile iron pipes, of DN 125 size. The heat from the sewage is transmitted through the walls of the ductile iron pipes and through their bedding to a pipeline of plastic coated copper tubes laid in the bedding. In the copper tubes, a refrigerant absorbs the heat and conveys it to the services room where, with the help of a heat pump, it is used to heat hot water.

BLS® – restrained joints in Hochdorf-Assenheim's new housing development

◆ For a long time now, the water supply utility Zweckverband für Wasserversorgung "Friedelsheimer Gruppe" has been refusing to make any compromises when selecting the material for its pipes: it will only use ductile iron pipes with the well-tried BLS® positive locking push-in joint system. The reason for this is that it is quick, easy and safe to connect and because ductile iron pipes are absolutely reliable. The utility supplies Hochdorf-Assenheim, a municipality in Germany's federal state of Rhineland-Palatinate, where building work has been going on for a new housing development on some 100 plots

for new homes. The plots cover almost 7 ha and comprise 32 plots for semi-detached houses, 17 for terraced houses and 51 for detached houses. The new network for supplying domestic and fire-extinguishing water uses the tried and tested BLS® joint system and is 1.29 km long. The utility's own laying crew installed 744 m of DN 100 ductile iron pipes of wall-thickness class K 9 to DIN EN 545, and 546 m of DN 150 pipes of the same type, in just a few weeks. The laying was successfully completed in spring 2010 and people were able to move into the first houses that same year.



Pressure sewage pipeline for Lugano

The "Lugano bypass" project is intended to be an effective means of relieving parts of the town from the high load imposed by through-traffic. The transport plan for the Lugano region (PTL) covers the bypass and a key part of it is the 2.6 km long Vedeggio-Cassarate road tunnel.

◆ The CDALED (Consorzio Depurazione Acque Lugano e Dintorni) water treatment utility for Lugano and the surrounding area, planned to accompany the building of the new road tunnel with the laying of a pressure sewage pipeline from the outdated Cadro sewage treatment works to the larger and more efficient Bioggio works. The sections of pressure pipeline required for the new connecting pipeline in the region of

the two portals of the tunnel were laid using ductile iron sewer pipes. The *hydrotight* restrained push-in joint was selected as the joint system. DN 500, class K 7, *geoecopur* fully protected pipes were installed in both the sections of the pipeline, which totalled 250 m in length. The polyurethane (PUR) coating and PUR lining meet the requirements which were laid down for the pipeline to be isolated from stray currents and against

electrochemical attack. With its very smooth finish (roughness coefficient $k \leq 0.01$ mm), the PUR lining also enables the energy costs for the future pumping station to be kept as low as possible.

On this building project, *geoecopur* fully protected pipes are contributing to environmental sustainability, meaning that they are saving on energy costs and have a long technical operating life.

Drinking and fire-extinguishing water for Frankenthal-Eppstein industrial estate

The Kartoffel Kuhn company of Mannheim is intending to move its production site to Frankenthal-Eppstein in Germany's Rhineland-Palatinate. For this it needs a fully developed industrial estate.

◆ As might be suspected from the name Kartoffel, a lot revolves around the potato at Kuhn. However, as well as mature and new potatoes, the company also sells vegetables and exotic fruits. A lot of water is needed to clean the vegetables and fruit.

The municipal utility Stadtwerke Frankenthal has laid a water pipeline some 2.8 km long from the Dürkheimer Strasse in Eppstein to the grounds of Kartoffel Kuhn's new plant. Because they are impervious to dif-

fusion, the decision was made to use DN 200 ductile iron pipes of wall-thickness class K 9 with an external zinc coat and epoxy top coating and with the tried and tested TYTON SIT PLUS® push-in joint. The nominal size of DN 200 was selected to ensure a secure supply of drinking and fire-extinguishing water. The development work having been completed late last year, the construction of Kartoffel Kuhn's production buildings can now begin.

DATES FOR YOUR DIARY

10/11 February 2011

25th Oldenburger Rohrleitungsforum (Oldenburg Pipeline Forum), Oldenburg

10/11 March 2011

34th Annual Conference on Hydraulic Engineering, Dresden

02/05 May 2011

WASSER BERLIN INTERNATIONAL 2011 (Trade Fair and Congress, Water and Wastewater), Berlin

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