



SIMOFUSE® Pressure Pipes – New wastewater pressure pipeline in a hard-to-access stream section



Top: Sinking the SIMOFUSE® pipe modules via the access structure. Bottom left: Transporting the pipe modules on specially built trolleys. Bottom right: Mounting the SIMOFUSE® pressure pipeline in the underground stream section

In the Luxembourg town of Differdange an easy-to-handle and pressure-resistant plastic piping system was needed to lay a wastewater pressure pipeline in an underground stream section that was only accessible in specific places. In addition, the confined spaces called for space-saving joining technology. SIMOFUSE® pressure pipes were the solution.

The project at a glance

Project

Connecting the town of Differdange and locality of Soleuvre to the Pétange sewage works

Connecting technology requirements

- ▀ Pressure-resistance
- ▀ Simple, fast laying
- ▀ Compact design

Clients

- ▀ SIACH – Syndicat intercommunal pour l'assainissement du bassin de la Chiers, Luxembourg
- ▀ Differdange Local Authority, Luxembourg
- ▀ Sanem Local Authority, Luxembourg

Contractor

OBG Lux S.A., Ellange

Sub-contractor

Enrotec Lux S.à.r.l, Luxembourg

Planning and site management

Schroeder & Associés, Luxembourg

Products used

- ▀ SIMOFUSE® Pressure Pipes
 - ▀ d 500 mm x 29.7 mm, SDR 17
 - ▀ Construction length: 3,500 mm
 - ▀ Overall length: 1,600 m

Laying method

New pipeline

Project duration

11 months



From left to right: SIMOFUSE® pipes in storage; special brackets and supports for the SIMOFUSE® pipes; suspended pipe in ovoid duct

Installed using efficient, space-saving SIMOFUSE® joining technology

Initial situation

The Luxembourg town of Differdange and locality of Soleuvre had previously been connected to the Pétange sewage works via a gravity sewer, a solution that was to be replaced by a new wastewater pressure pipeline. Due to the complicated pipe routing through the old system, it was clear from the very outset that only plastic pipes could be used for pressurised drainage.

The task

The connection for the planned storm water tank in Differdange to the main sewer in Niederkorn goes directly across the grounds of a steelworks in Differdange. As the pipe is routed under connecting roads and rail tracks that are in permanent use and alongside the buildings of the steelworks, it was decided to lay the new pressure pipeline in the underground section of the river Chiers. Due to the poor accessibility (reach lengths up to 400 m) and the depth of the excavation trenches (more than 8 m), the plastic pipes had to meet the following specifications:

- Short pipe modules to allow manual handling
- Simple, fast weldability without elaborate weld preparation work
- Pressure resistance to the maximum pressure occurring in the event of water hammer
- Capable of being combined with special pipe fittings

The solution

SIMOFUSE® pressure pipes d 500 mm x 29.7 mm with an overall length of 3,500 mm proved to be the best solution for installation in poorly accessible and deep trenches. Thanks to the integral SIMOFUSE® connecting technology, the pipes could be welded quickly and efficiently in this section. SIMOFUSE® technology dispenses with the need for additional peeling off of pipe ends and involves only one welding step compared with the use of electrofusion sockets.

Thanks to the short overall length, the pipe modules were introduced into the confined spaces of the old sewer easily and safely. The SIMOFUSE® pressure pipes met the stringent requirements for the construction project and also allowed the new sewage main to be installed without disrupting traffic.

SIMOFUSE® pressure pipes

Properties

- Pipe modules PE 100 SDR 17 pressure resistant to 5 bar
- Integral electrofusion joining technology
- Independently monitored by MPA Darmstadt testing authority
- Optimum laying in confined areas
- Absolutely tight welded connection with short preparation times
- Axial restraint due to high-tensile-strength welding joint
- Smooth, no-gap pipe transition inside and out

Product range

- Pipes

Further information:

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