

Relining existing pipes with modern components made of polyethylene

While water networks have to be renovated regularly in order to guarantee the safe and reliable transport of drinking water, utilities are faced with a major challenge: Maintenance work often requires large trenches to be opened which is not only expensive but also has a negative impact on the surrounding communities. Because of this, France's largest water utility has elected to install a complete trenchless solution with GF Piping Systems in the region of Lyon.

Project background

With half a million inhabitants and an area spanning nearly 50km², the water network of Lyon is constantly evolving as old pipes have to be maintained or replaced. When a section of asbestos cement pipes starts to leak, the responsible utility has to quickly and efficiently install new components. However, the section in question runs through a densely populated area of the city with a high traffic volume. As a result, the utility plans to reline the old pipes with long-lasting and trenchless alternatives.

Selected technical solution

The decision is made to install a complete package by GF Piping Systems which includes pipes and fittings from d225 up to d630mm, bends from 11° to 45°, couplers, flange adaptors, as well as the necessary butt welding and electrofusion machines. The piping components are made of PE100 RC, a type of polyethylene that gives pipes an especially high resistance to cracking. Thanks to the corresponding tools like the branch saddle topload method and the patented pipe-in-pipe coupler system, the installation yields quick and high-quality results.

Achieved improvement

It was a challenge for the customer to find one supplier that could provide a complete package which would meet their expectations. By choosing GF Piping Systems as one supplier, the utility company benefits not only from an efficient and simplified customer experience, but also maximum compatibility between tools, fittings and machines – and therefore achieves excellent pipe connections. The trenchless installation also saves time and costs which reduces the impact on the environment as well as the surrounding communities who are not affected by the process. After the renovation is completed, the utility is pleased with the reliability of the system and expects to reach its targets to reduce non-revenue water in Lyon.



GF Piping Systems delivers an entire system – from pipes and fittings all the way to welding machines and installation tools.



In order to ensure a fast and simple installation, the utility decides to reline the old cement pipes.

Customer benefits

- Polyethylene combines lightweight, flexibility and corrosion-free properties, making it the ideal material for trenchless laying.
- Complete solutions by GF Piping Systems ensure the efficient, safe, and reliable transport of water.
- Plastic piping systems are a cost-effective and longlasting alternative to metal and cement water networks.

Where next?









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