

Modernization of the water distribution
for firefighting with ELGEF Plus

Well prepared for fire

Smooth installation and reliable
firefighting system thanks to the
ELGEF Plus piping system



Well prepared for fire

Sprinkler systems and firefighting pipes prevent a fire that has broken out from developing into a major blaze. Once a fire has broken out, every second counts. It can't afford to suddenly be stuck for water. A cardboard manufacturer had its existing fire-extinguishing piping system modernized to ensure a reliable supply of water for firefighting. Three new connections were added to the sprinkler distributors. For the project, GF Piping Systems supplied piping components made from polyethylene as well as the tools required for the installation.

Project background

Over 1,000 employees, divided up into different corporate divisions, are responsible for all processes that arise along the value chain. The cardboard producer's customers need to be able to rely on product quality and good handling. For the modernization of the firefighting piping, the company took on the role of the customer and had the same expectations with respect to the quality of the new piping components.

Technical solution

Working with the planning company Pfistermeister, those responsible for the project selected the resistant and durable material polyethylene for the piping (PE100 SDR11). 30 meters of PE pipes, PE spigot fittings, and ELGEF Plus couplers for electrofusion with the dimension d355mm were used. The electrofusion couplers used are developed as "pipe-in-pipe" technology. A reinforcement ring made from polyethylene is used during production, contributing to an optimal fusion outcome. The MSA electrofusion unit from GF Piping Systems with fusion documentation as well as tools for fusion preparation were put into use for the reliable joining of all pipe materials. Following the removal of the oxide layer on the pipes in a rotary process to the desired insertion depth, all that was required during installation was to insert the connectors on the fitting and scan the barcode. The machine was responsible for the fusion process. The electrofusion couplers that were used feature a concealed wire coil that is supplied with power during the fusion process. If irregularities occur, the machine stops immediately and informs the installer by means of an error message. Thanks to the documentation function of the fusion devices, the course of the jointing process can be tracked reliably. After further cooling time, which was kept to a minimum, the pressure test was subsequently carried out successfully.

Improvements achieved

Through its coordinated products, tools, and technical support, GF Piping Systems provided reliable joining technology from a single source for the project's firefighting piping, meaning that the extinguishing system at the location was able to be rendered state of the art once again without restricting cardboard production and ongoing operations.



Simple assembly of the ELGEF Plus couplers thanks to large internal diameter.



Installation of the new polyethylene firefighting piping.

Customer benefits

- "Everything from a single source" – coherent overall solution
- Resistant and durable PE piping system
- Automated fusion process with high safety and reliable documentation function
- ELGEF Plus electrofusion couplers are approved for buried piping systems for large-scale fire protection according to FM 1613
- Simple assembly thanks to the large inner diameter of the coupler

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