

GF Piping Systems

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SYGEF ECTFE

Long-lasting and reliable
plastic piping systems for
hazardous chemicals

Customer reference: Merck & Cie

Merck & Cie. relies on SYGEF ECTFE,
the ethylene chlorotrifluoroethylene
system by GF Piping Systems.

SYGEF ECTFE enables a reliable neutralization of chemicals



Merck & Cie. is a subsidiary of the German group Merck KGaA and specializes in the Healthcare and Life Science sectors. With several facilities across Switzerland, the company produces high-quality products for the global market. In the field of wastewater treatment, plastic piping systems are used to safely and reliably transport hazardous media. Here, Merck relies on the SYGEF ECTFE system by GF Piping Systems.

Project background

Merck uses a special plant to treat a selection of wastewater with hazardous chemicals. Metal or PE (Polyethylen) piping systems are typically used for these wastewater treatment applications, but the Swiss company has decided to install the new SYGEF ECTFE System by GF Piping Systems instead. The SYGEF ECTFE System was designed with a special focus on hazardous chemicals to ensure the highest possible service life and safety. Compact components enable the system to be implemented in space-critical skids.

Technical solution selected

With SYGEF ECTFE, GF Piping Systems has developed an infrared welded plastic solution that is suitable even for highly concentrated media as well as high process pressures and temperatures. Ethylene chlorotrifluoroethylene (ECTFE) is exceptionally resistant against high temperatures, corrosion, permeation, and chemicals. To ensure maximum system safety, GF Piping Systems conducted long-term tests according to ISO 10931, as well as pressure tests in its main operational range between 0°C and 80°C with various hazardous media.

Improvements achieved

After a trial run, Merck was convinced and decided to implement a complete system by GF Piping Systems. Due to tight spaces, the complex layout of the existing polyethylene system had to be replicated by the company Hürner AG from Tagelswangen as precisely as possible. Thanks to automated IR welding technology, the new pipes could be installed quickly and safely despite a limited time frame. The properties of the SYGEF ECTFE system now offer Merck an even longer lasting operation of their wastewater plant, while maintenance costs and downtime are reduced.



Automated IR welding technology ensures maximum safety and reliability.



For the safe transport of highly aggressive chemicals, Merck & Cie chooses the SYGEF ECTFE system from GF Piping Systems.

Customer benefits

- ECTFE is an exceptionally resistant material for the transport of highly aggressive chemicals and is suitable for high process pressures and temperatures.
- The space-saving components have been designed and tested for especially challenging applications and are particularly suited for tight spaces.
- System components and jointing technology from a single source not only guarantee the best possible welding quality, but also maximum safety.

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