

Semiconductor manufacturing
SYGEF Plus
process systems to meet
the strictest specifications

Ultra Clean Holdings, Liberec, Czechia

The reliable top-quality choice for
the most stringent requirements in
semiconductor manufacturing.

A premier fluoropolymer solution for increasing industry demands



UCT is a global leader in semiconductor fabrication support. In the face of a highly volatile market, the company seeks local support for greater security, while still relying on a global supplier, with representation only minutes away in Liberec, Czech Republic. To meet the required specifications in terms of cleanliness, surface roughness and chemical resistance, a SYGEF solution from GF Piping Systems was chosen.

Project background

The new semiconductor production facility of UCT is beginning to operate just as industry requirements for purity, leach-out values, roughness and resistance are tightening. Meanwhile, technologies are becoming increasingly compact, yet the need for cost-effectiveness and easy welding remains the same. Unlike PFA parts, PVDF-HP components are a tried-and-tested material on which to base UCT's new capital investment.

Technical solution selected

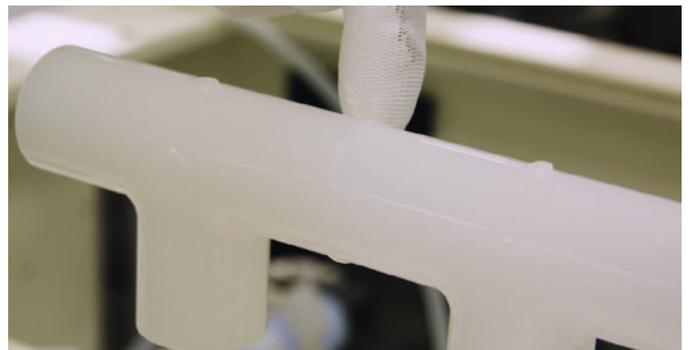
The main competence of UCT is to create mixing and dosing technologies for different chemicals. These dosing and mixing stations are used in the production of the semicon industry where microchips are manufactured. The standards and conditions for cleanliness are high as contaminations needs to be avoided. The SYGEF Plus (PVDF-HP) is therefore used as an exhaust and drain system which leads the chemical fumes out of the unit. PVDF is a thermoplastic fluoropolymer with a melting point above 175°C and a wide service temperature range of -20°C to 140°C. SYGEF-PVDF systems are ideal for use in aggressive chemical or ultrapure water systems since they are generally considered inert, have high strength and stiffness and are readily weldable into system components. GF Piping Systems has more than 45 years of experience in fluoropolymers. The parts are manufactured, cleaned and packaged under cleanroom conditions ISO class 5 (100).

Improvements achieved

The SYGEF Plus system installed at this brand-new semiconductor plant fully meets the customer's expectations of purity and for chemical and thermal resistance as well as fast and reliable welding using a range of fusion jointing technologies. The expandable single-source solution is adaptable to future needs, with excellent accessories, parts, servicing and support available. The solution therefore provides the optimum conditions for UCT to consolidate and expand its leading position in the semiconductor industry.



The SYGEF Plus (PVDF-HP) is double-bagged to ensure highest safety and cleanliness standards.



The IR welded system for industrial applications offers premier quality with outstanding performance.

Customer benefits

- High purity chain for guaranteed purity
- Excellent chemical resistance
- Single-source supplier which ensures time saving and simplifies project management
- Outstanding pressure/temperature performance
- Extremely smooth surface finish
- Comprehensive system range

Your contact

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