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Microelectronics Portfolio Sulfuric Acid (H₂SO₄) Containment Piping System

About Us

HPS was founded in 1985 and has grown from a small enterprise to a leading industry supplier outfitted with a permanent Class 100 / Class 1000 Clean Room Certification. Services offered include custom fabrication, polishing services, detailed 3D CAD drawings, and analytical testing. Join our roster of customers that include NASA, Lockheed Martin, MedImmune, and others - experience HPS.

Contact Us

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The Challenge

One of our repeat customers — a leader in the semiconductor industry — recently called on HPS to carry out a risky project transporting concentrated sulfuric acid (H₂SO₄) from their Virginia facility. The customer supplied us with a drawing of the process piping system they needed to ensure the safe transportation of these hazardous chemicals.

The Strategy

This project involved detailing, fabricating, and installing a double-walled containment piping system with over 900 feet of linear piping for sulfuric acid. The inner carrier piping was made from 1¼" PFA tubing, resistant to sulfuric acid corrosion, while the outer containment piping was made from clear 3" PVC. The double-wall design would allow for rapid recognition and repair of any potential leaks in the inner carrier line. We fabricated the piping according to customer supplied specifications and P&ID, and then sent a field service team on site for a full installation.

Because of the customer's rapid growth over the last two decades, there was already quite a bit of existing process piping where we needed to install the double-walled containment system. Our crew carefully routed the piping around the obstacles while maintaining a 1" tolerance between the existing chemical and gas piping. During installation, the team wore chemical safety suits for protection against the hazardous conditions and, after completion, the PVC pipe was pressure tested for 4 hours at 4 psi and the PFA tubing was tested for 4 hours at 90 psi to assure system integrity.

The Result

Not only was this project risky, but it also needed to be carried out while other trades were performing their respective jobs in the same location. Our crew coordinated across several other teams working in the shared space to ensure a smooth and successful installation without any schedule disruptions.

Highly confident in our ability to perform jobs professionally, on time, and on budget, this customer continues to come back to HPS for additional projects. Our team takes pride in every project and our continuous commitment to customers. When [we work for you](#), your needs become our needs.

