Water Treatment Case Study

ASAHI/AMERICA®
Your Experts in Plastics™

Background

Searching for an alternative to the high costs of installing exotic metals on water treatment skids for sulfuric acid, the client turned to Asahi/America to explore their options. Asahi/America not only offered options, but a complete solution to the client's application needs.

Solution

Asahi/America and their distributor presented Ultra Proline® Halar® piping and diaphragm valves for the skids, along with Asahi/America's state-of-the-art welding tool, the SP 110-S, to install the system.

Ultra Proline® is known to be resistant to 98%+ (H_2SO_4) in the long-term in today's chemical feed systems. The chemical resistant properties of Ultra Proline® proved to be the most appropriate piping choice for the sulfuric acid medium.

Asahi/America introduced the SP 110-S machine to the customer. The SP 110-S encompasses the latest technology in IR fusion equipment and features a fully automated welding process that results in consistent, repeatable, and traceable welds.

These features convinced the client that their pipe fitting personnel could easily be trained to successfully fabricate the Ultra Proline® system.

While offering ease of use through automated procedures, the SP 110-S also provides flexibility for custom systems. The custom parameter feature allows the operator to pre-heat the desired pipe or fittings with adjustments for the slightly different melt-flow characteristics of the pieces. The adjustable planning feature of the SP 110-S allows the operator to determine exact take off lengths required to meet specific dimensions for close tolerance piping.

After Asahi/America trained and certified the plumbing sub-contractor on the SP 110-S tool, the Ultra Proline® water treatment skids were assembled in the contractor's fabrication shop. The client's use of Asahi/America's Ultra Proline® piping and the SP 110-S tool resulted in a faster, more economical installation that will outlast metallic piping in their concentrated sulfuric acid application.

Asahi Advantage

- Custom fabrication options
- On-site weld training opportunities
- Advanced IR welding technology available
- Start-to-finish project assistance

Asahi/America is a supplier of a wide range of valves, actuators, pipe, fittings, and welding equipment for high purity, commercial, industrial and environmental applications. Discover more at **www.asahi-america.com**

Applied Products

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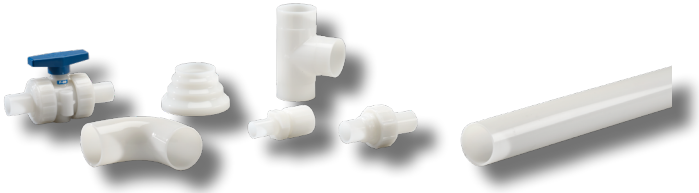

Ultra Proline ®- Halar®(ECTFE) Piping System

Features/Benefits

- Perfect substitute for rigid PFA pipe
- ECTFE is an optimum material for transporting sodium hypochlorite, chlorine gas, ozone and chlorine dioxide
- Ideal for solvents and/or high pH applications at elevated temperatures

Pipe and Fittings

- 20mm-110mm (1/2” - 4”) SDR 21, 150psi

Valves

- Type-21 ball valves: 20mm - 32mm (1/2” - 1”)
- T342 diaphragm valves: 20mm - 63mm (1/2” - 2”)
- Frank series regulating valves: 20mm - 63mm (1/2” - 2”)

Welding Methods

SP 110-S Welding Tool

Features/Benefits

- Automated planing depth feature
- Automated fusion process
- Internal validation program
- Printer and clean room labels
- Ideal for shop operations
- New power transformer for added protection

Piping

- Single wall piping systems

Size Range

- 20mm - 110mm (1/2” - 4”)

Materials

- PP, PPn, PVDF, ECTFE

Options

- PFA capable tool
- SP 110-S operator card

Ultra Proline® - Halar® ECTFE Piping Systems

Because of its excellent chemical and temperature resistance, Halar® piping systems are highly versatile and suitable for the broadest range of applications. Halar® can handle a pH from 1 to 14. Halar® does particularly well where other alternatives like expensive metal materials (titanium, alloy 20, 316/304L stainless steel) or lined steel are being used with limited results. Halar® is used for high concentrations of acids (sulfuric acid) and highly oxidative applications like sodium hypochlorite, chlorine gas, ozone, and chlorine dioxide with great success. It is also suitable for solvents and/or high pH applications at elevated temperatures.

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