

## Water Treatment Portfolio

# Waste Water Treatment Plant Custom Digester Wiper

## About Us

Since 1985, High Purity Systems has provided precision welding, quality piping installation and fabrication solutions to the industrial sector. High Purity Systems delivers value and responsiveness to meet the ever-changing needs of our clients. Expertise includes Class 100 Clean Room orbital welding, onsite piping installations from stainless steel to carbon steel, piping fabrication shipped nationally and custom prototyping.

## Contact Us

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## The Problem

During a stainless steel support installation at a Virginia waste water treatment plant, the High Purity Systems (HPS) team overheard plant employees discussing a challenge. While trying to view the digester tank's sludge level, an obstruction was affecting their ability to properly gauge the reduction of waste in the vessel and the rate at which new material could be added for processing.

## The Strategy

The HPS team always loves a good challenge. The plant employees wanted a way to view the sludge level but knew they wouldn't be able to keep any viewing port clear of the foam inside the tank. Being naturally curious, our team couldn't resist investigating the manway at the top of the vessel, where a solid steel blind flange was installed.

After discussing potential options for a view port and various techniques to keep the manway view port clear, our team sketched out a wiper mechanism concept and explained the functionality to the waste water processing manager. After reviewing our initial concept our customer added the following requirements:

- Test to 5psi
- Use flame retardant material for all flanges, gaskets, and O-rings
- Connect to a non-standard flange

Even with these additional requirements, the HPS team was eager to develop a solution for the plant. Likewise, the team at the plant was so excited about potentially fixing the problem that they asked us to pursue a solution. The resulting proposition was a completely customized project. In fact, every single part of the wiper was custom-made for this application.

The HPS R&D team worked tirelessly to test possible configurations in both simulated CAD and prototype samples. Once the prototype was operating as we had envisioned, our team manufactured and installed it at the waste water treatment plant.



## The Result

The customer loved the final product so much that employees frequently show it off to visitors touring the facility. At their urging, we are offering this product to other waste water treatment facilities experiencing the same challenge.

