

Fab-Tech's PSP[®] Duct Plays a Critical Role at DC Water's Blue Plains Facility



Grit Chamber to Fan.

Blue Plains is the largest wastewater treatment facility in the world covering more than 150 acres along the Potomac River. Utilizing advanced treatment systems, DC Water provides water and sewer/wastewater treatment for 600,000 residents, 17.8 million annual visitors and 700,000 workers in the District of Columbia along with wastewater treatment for another 1.6 million people from Maryland and Virginia. The nitrification/denitrification and filtration plant capacity handles from 370 million gallons per day up to a peak level of more than one billion gallons per day.

Fab-Tech, Inc. (Colchester, VT) was invited to meet with the design engineering firms of CH2M Hill, Brown & Cadwell and CDM/Arcadis to discuss the overall benefits of PermaShield Pipe (PSP[®]), a fluoropolymer coated stainless steel corrosive fume exhaust system for DC Water's Capital Improvement Program. Benefits discussed included high grade stainless steel construction for an aesthetically pleasing installed product with zero life maintenance cost, no UV degradation, and no cleaning or painting required. The fluoropolymer barrier coating was shown to be more than adequate to handle the many malodorous and potentially hazardous corrosive bi-products of each wastewater treatment process. Also pointed out is the "zero" flame spread and low smoke generation rating of PSP[®], the only Factory Mutual coated duct of this type to carry such an exceptional rating. This offered all the parties involved the confidence that PermaShield Pipe would not burn.



Wastewater
Odor Control

Benefits to Blue Plains

Significant labor savings in cost and time:

- ✓ Installed in half the time of FRP
- ✓ Cost of field labor was 50% that of FRP
- ✓ Eliminated the need to mix catalysts / resins to meet fluctuating weather conditions

Little to no maintenance required:

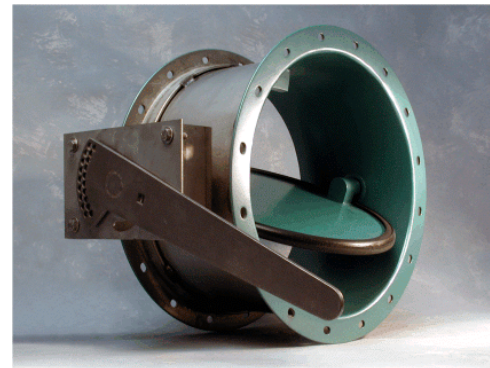
- ✓ PSP® does not require GEL coating for UV protection
- ✓ Regular cleaning to eliminate mold is not required like FRP

Reduced insurance cost:

- ✓ 0 flame spread and <20 smoke generation rate, per ASTM E-84, mitigates risk due to fire in the duct system

Superior corrosion resistance providing decades of use compared to:

- ✓ FRP Duct
- ✓ Stainless Steel Duct
- ✓ Galvanized Duct
- ✓ Aluminum Duct
- ✓ Plastic (PVC, PP) Duct



AMCA Certified Damper

"We were very pleased with both the quality of the product and the working relationship with Fab-Tech. Fab-Tech's diligent customer service and thorough coordination with CCI's Field and Management Staff was critical in CCI's ability to meet the project completion date and deliver the customer with an exceptional final product."

- Declan Munslow, Vice President Corinthian Contractors Inc.



“Superior Performance and Low Cost are a Winning Combination!”

Wastewater Vapors

PermaShield Pipe is recognized as the industry leader for removal of corrosive and highly hazardous fumes from a variety of industrial applications. Exhaust duct lines at wastewater facilities handle not only malodorous fumes, but potentially health hazardous vapors containing compounds and chemicals. Many of which are corrosive in nature.

"PSP®'s unique combination of features and benefits makes it the best choice for decades of worry free exhaust service."

Biosolids & Dewatering

One application that DC Water wanted PSP® to be utilized was in the Biosolids Management Program (BMP). Upgrades to this program included four thermal hydrolysis process trains, four mesophilic digesters and a final dewatering facility. Several thousand feet of coated PSP® duct, ranging in size from 12 inch to over 60 inch diameter, were installed as part of the support infrastructure for these state-of-the-art upgrades.

"PSP® easily addresses the challenges of odor, corrosion and flammability."



BioSolids and Dewatering Building.

Grit Chambers 1 & 2

DC Water also invested \$84 million into its two Grit Chamber buildings, including a new continuous grit removal system with submersible pumps and a new traveling bridge grit removal system. In the grit chambers, raw sewerage is sifted to remove debris such as rocks, plastics, sand and other larger debris. All of the chambers require odor collection systems to protect the external environment and to keep the levels of potentially toxic fumes below harmful levels for workers.

Ulliman Schutte Construction began installing PSP® odor control exhaust in 2015 and continues to do so for both buildings; having added hundreds of feet of 44 inch down to 16 inch duct.

"Sound exhaust system with easy installation."

- Pete Mecca, Project Superintendent
Ulliman Schutte Construction



CASE STUDY

"Joint Gasket applied without issue and no detectable leaks have been found."

- Pete Mecca, Project Superintendent Ulliman Schutte Construction



Dewatering facility odor control duct.



Coming up and across for Grit Chambers.

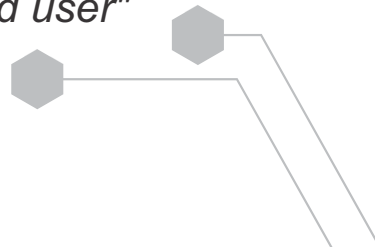
Operations and Maintenance

PermaShield Pipe continues to partner with DC Water in an effort to reduce odorous fumes and its effects on the environment, while helping to control operating costs and increase process efficiency.

The solutions that DC Water engineers envisioned were made a success by employing a combination of superior design and cutting edge technology.

In conclusion, corrosive fume exhaust should be just that...corrosion resistant. Fab-Tech's PermaShield fluoropolymer barrier coating with proprietary resin technology assures adhesion to the stainless steel, resulting in a coating that will not delaminate. Based on published data, PSP® far surpasses FRP in chemical resistance and the PSP® robust stainless steel substrate will not burn, collapse or leak.

"A lifetime of savings and value for the end user"



About Fab-Tech, Inc.

Fab-Tech manufactures PermaShield Pipe (PSP®), a revolutionary hybrid fluoropolymer coated stainless steel duct system recognized worldwide as the premier solution for corrosive and hazardous fume exhaust needs. PermaShield Pipe is a fully engineered, modular fume exhaust system that combines the reliability of stainless steel with the superior corrosion resistance of Fab-Tech's proprietary PermaShield Fluoropolymer Barrier Coating.

