



Nonstick & Industrial Coatings

"We saved DuPont \$100,000 with their own coating!"

Forward-thinking manufacturer, Fab-Tech, Inc., of Vermont, USA, solves corrosion problem in a DuPont plant using its PSP® exhaust venting system and a proprietary DuPont fluoropolymer resin.

In the manufacturer of Oxone® monopersulfate compound, DuPont uses oleum, or fuming sulfuric acid. Oleum is highly corrosive and reacts violently with water. It is playing havoc with the stainless steel pipes in most plants.

In a pleasant twist of fate, it turned out that one of DuPont's coatings, a fluoropolymer resin, developed exclusively with Fab-Tech for their unique coating system, was the solution. And thanks to this forward-thinking customer, DuPont saved more than \$100,000 on the project.

"They knew they needed a better solution."

"They were eating up stainless steel. The 316L pipes were pitting and leaking because of the corrosive nature of the Oleum," explains Giles Wagoner, of Fab-Tech, Inc. "They had been using stainless steel pipe for about 10 years and they knew they needed a better solution."

"DuPont Engineering thought they basically had only

a couple of options," says Jay Kempf, Technical Representative, Fab-Tech Inc. "They could keep using stainless steel but have to change it out every six to twelve months, with additional replacement costs and downtime." DuPont had also considered FRP (fiber-reinforced plastic), some exotic alloys and lined pipe. "In this application, the pipe has to be heated to keep moisture from condensing and reacting with the Oleum," Kempf says. "Epoxy and phenolic resins don't have good heat transfer and don't hold up well to that kind of heat. The other options that perform better than standard stainless steel are prohibitively more expensive."

Fluoropolymer coated pipe was the answer.

Fab-Tech is the leading worldwide manufacturer of coated stainless steel exhaust solutions for the Semiconductor Industry. "After more than a decade of experience in corrosive environments, we know a lot about the outstanding chemical resistance of the fluoropolymer in our PSP® coating system," says Wagoner. "Our proprietary process for internally coating stainless steel pipe seemed to be a natural fit. We figured our PSP® venting system would save DuPont \$100,000 in reduced material and labor costs, compared to the next closest option."

How is such a significant savings possible? Kempf explains: "In exhaust applications, lined pipe is a heavy-duty, brute force approach to taming chemical attacks, and consequently very expensive compared to our solution. At a fraction of the cost the lifespan of our PSP® product is comparable. We have an exclusive primer that makes a rock solid base for custom coating stainless steel. In corrosive environments it just won't peel, and just won't blister."

Material savings were just the beginning.

"So we saved DuPont \$100,000 with their own coatings! In addition to saving on material costs, DuPont also saved on installation costs because the stainless steel pipe PSP® system is much lighter and easier to install using the unique EZ clamping system." Wagoner stated. He went on to say that, "They told us they had budgeted three days to do the job, they got the work done in less than one day."

And it doesn't end there. "Cost is important," cites Pradip Khaladker, of DuPont Engineering, "but at DuPont safety comes first and product quality is a close second. The PSP® system from Fab-Tech fills a big gap in materials engineering because it lets us meet all three requirements."

