

STRONG, DURABLE FIBERGLASS CONDUIT, ELBOWS AND STRUT STAND UP TO TOUGH CHEMICAL PLANT ENVIRONMENTS



Challenge

A large chemical company in Texas that produces the plastic resins for PVC was struggling with corrosion. Polyvinyl chloride (or PVC) is a type of plastic commonly used for chemical spray bottles, pipes, clothing, bags, upholstery, tubing, flooring, and pool toys. It's nearly 57% chlorine and requires less petroleum than other plastics. The highly corrosive chlorine used as a base material is hard on manufacturing plant systems, including production equipment and electrical.

To protect electrical infrastructure, the company had installed PVC-coated steel conduit. But that selection required replacement every five years. The caustic environment was taking its toll on electrical conduit and the price paid was repeated re-install production disruption in addition to high product and installation costs.

Solution

PVC-coated steel is a common conduit solution in volatile applications that require a strong, durable and corrosion resistant conduit to protect electrical systems. It's got strength from steel plus a coating that protects against corrosion, ideally.

Yet many contractors and project managers are unaware that there's another alternative out there. Fiberglass conduit, elbows and strut supports are nonmetallic, yet strong and durable. They are corrosion resistant to many chemicals and in most cases eclipse the protection provided by PVC-coated steel. Their longevity is far superior. On top of that, they are less costly than PVC-coated steel conduit and support systems.

While fiberglass conduit, elbows and strut have the strength to withstand caustic chemical plant environments, they are also lightweight for smooth portability in the field. Also, quick connections make installation fast, and both the conduit and strut are easy to cut in the field, making installation seamless.

Results

Installation progressed swiftly, saving time, money, and production disruption on the re-install. Additionally, material costs were lower, as PVC-coated steel conduit and supports are substantially heavier and much more expensive than fiberglass conduit, elbows, and strut. The Champion Fiberglass conduit and strut systems are outlasting the PVC-coated conduit and support counterpart, saving substantial production time and money as no replacements due to corrosion are required.

For this chemical plant, the replacement of deteriorated PVC-coated steel conduit started small. After the contractors and project managers became familiar with installation and saw the corrosion-resistance of fiberglass conduit, elbows, and strut, they continued to use Champion Fiberglass.

QUICK FACTS

PROJECT NAME

Large Plastics
Manufacturer

APPLICATION

Chemical Plant

CHAMPION FIBERGLASS PRODUCT(S)

[Champion Duct®](#)
[Champion Elbows](#)
[Champion Strut™](#)



BENEFITS

- > Extreme corrosion resistance for a caustic environment
- > Light weight and easy connections for smooth installation
- > Cost savings due to lower materials and installation cost
- > Product longevity that eliminated regular PVC-coated steel re-installs

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