

Linx Coated Ductwork



Over 40 years ago, a process was developed to coat galvanized steel with a polyvinyl chloride (PVC) plastic coating to resist corrosion to ductwork in underground and other specialized exposed applications. It has been an accepted manufacturing practice to utilize PVC pre-coated steel coil to spin spiral pipe and to use sheets of pre-coated PVC steel to fabricate fittings. However, these processes pose several problems. When spinning pipe, damage to the PVC coating occurs at the drive wheel, forming head, and clinching wheels. Also, shearing of PVC pre-coated sheets creates an exposed edge. In addition, fabrication practices must utilize seams that are button punched, riveted, or screwed and internally sealed. The ability to weld connections is not possible due to the PVC coating on the steel. The end result is a compromised coating and fittings lacking the full strength that would be available using other fabrication techniques.

An alternate method is to coat the ductwork after it is fabricated. This allows the fabricator to weld, gore lock, and spin the pipe without regards to damaging the coating. Linx has elected to use an environmentally friendly “baked on” powder coating system that has a zinc rich epoxy base coat and a polyester top coat. The epoxy base coat provides superior chemical resistance, in most applications, equal to or better than PVC. The polyester top coat is applied to protect the base coat and for improved visual appearance.

Why is this not offered by other manufacturers?

The availability of coaters with large enough ovens used to bake on the powder coating is limited. Linx, located in Portsmouth, Virginia, just happens to be in the vicinity of the world’s largest military naval installation and its corresponding ship building and repair facilities. Linx is able to take advantage of this resource to offer a superior product at competitive prices.

From time-to-time Linx receives requests to provide guidance for the design of underground and specialized chemical resistant ductwork systems. From a manufacturer’s point of view, this proves to be very challenging due to:

1. Assumed liability for offering engineering design;
2. Changes in the conditions of service;
3. Unknown specific site conditions; and
4. Control or inspection of the installation.

For specialized chemical resistant ductwork, Linx is willing to provide test samples and technical guidance for chemical resistance validation, and provide a variety of powder coating systems to meet your individual requirements.

Linx has been supplying ductwork systems using this process for over 5 years, and PVC pre-coated steel for almost 15 years. Linx adheres to “SMACNA - HVAC Duct Construction Standards Metal and Flexible – Third Edition, 2005” and fabricates ductwork in accordance with SMACNA’s guidelines for “Positive Pressure to 10 inch water gauge”, unless additional thickness is requested. In addition, Linx can fabricate ductwork to minus 10 inches water gauge using the above Standard, or minus 30 inch water gauge using SMACNA’s Industrial Duct Construction Standard. In addition, as standard practice to minimize shipping damage and for additional crushing strength in underground installations, Linx corrugates all spiral pipe (8 inches and larger).