



JCM Industries, Inc.

Adhesives in Manufactured Gasketed Fittings

The application and use of adhesives in the assembly of gasketed pipe fittings has progressed through the years. Early manufacturers of pipeline products packaged these components as separate elements and simply wired or taped their O-ring gaskets to the metal parts and the field technicians/end users placed the gaskets in the fittings and installed them on the pipe. While factory assembly personnel ensured that each fitting had its gasket when it left their department, there was no control over what happened after it reached the customer. Gaskets were easily "borrowed" to replace a lost or damaged gasket and the fitting from which the gasket was "borrowed" was still a usable fitting when a replacement gasket could be recovered from the manufacturer (or somewhere else). Years of replacing missing gaskets to distributors and end users convinced manufacturers to find a better method of keeping all the components as one unit from factory to field resulting in the concept of "gluing in gaskets."

Today JCM Industries uses adhesives to install and secure gaskets in their proper place in the fitting until it is installed on the pipe. For fittings such as the JCM Models 412, 422, 419, 452, 454, 459 Tapping Sleeves and our 400 Series Service Saddles that incorporate a gasket groove design, once the fitting has been properly positioned and installed on the pipe and the bolts have been tightened to the recommended torque values, the adhesive (glue) has absolutely no bearing on the success of the water tight seal between the gasket and the pipe surface. The machined or cast groove of the fitting will "trap" the gasket on the interior (waterway) and exterior (fitting shoulder/body) and prevent any gasket movement or blowout. In fact, JCM has some contractors who prefer gaskets be shipped loose with the fitting and install the gasket at the job site. Other manufacturers who do not use a gasket groove design for their outlet seal tapping sleeves do depend upon adhesion contact because they do not have the added safety factor of "trapping" the gasket.

For fittings that utilize a full body gasket design, such as the JCM Models 432, 462, 439 Tapping Sleeves and JCM 100 Series Universal Clamp Couplings, basics of the same concept applies. Gluing of the full body gasket is used to prevent movement of the stainless body off the gasket or the gasket from migrating out from under the sleeve. While the adhesion step prevents gasket movement, the critical mechanical process of tightening the bolts to the recommended torque levels is the determining factor to a successful installation and performance of the sleeve. When the fitting is properly installed on the pipe and bolts are tightened to their recommended levels, the gasket is trapped between the body of the fitting and the pipe surface. The strong, yet flexible stainless steel shell conforms to pipe irregularities (out of round, flat spots, etc.) and confines the gasket with a coefficient of friction to resist gasket movement.

These design concepts and criteria do not absolve a manufacturer's responsibility to provide appropriate measures to the successful installation of gasketed fittings; however an understanding of all the manufacturing components and their intended role in a product's final application will ensure a worry free installation.

For more information about JCM gaskets and their designs, contact JCM Industries Engineered and Technical Sales Department at 1-800-527-8482.