

PROTECTING THE PIPELINE

Dura-Bond Industries Delivers on its Promise for Quality FBE-Coated Pipe

► In North America, fusion bonded epoxy (FBE) is the primary protective coating used for corrosion protection on steel pipes. This process requires attention to detail and focus on quality to ensure protection that will last for generations. That's exactly the approach taken by Dura-Bond Industries, one of the nation's premier suppliers of gas transmission pipeline.

For over 50 years, Dura-Bond has served gas transmission, midstream, gathering and gas distribution pipeline companies with high quality steel pipe, protective pipe coatings, and pipeline products from three facilities in the Marcellus Shale region. Recently, the company, owned and operated by the Norris family, was awarded a steel pipe manufacturing contract by Atlantic Coast Pipeline, LLC, a joint venture composed of four major U.S. energy companies (Dominion, Duke Energy, Piedmont Natural Gas, and AGL Resources), for the production of nearly 540 miles of pipe at its manufacturing operation in Steelton, Pennsylvania. In a separate transaction, Dura-Bond also signed an agreement with Dominion to

produce an additional 39 miles of pipe for its Supply Header project.

A contract of this magnitude – totaling more than \$400 million – requires extensive planning and execution. It's the approach taken for every length of pipe created by the company, from its Steelton manufacturing plant to the coating facility in Duquesne, Pennsylvania.

About 200 miles west of Steelton, the Duquesne coating operation is where miles of pipe are put through an FBE process that encompasses four steps: Surface Preparation, Heating, Coating Application, and Inspection and Quality Control. Dura-Bond Vice President/General Manager Ryan Norris and Plant Manager Dan Swearingen are tasked with ensuring the quality of each pipe segment produced, especially as each step in the FBE process

Pipes are heated via in-line furnaces prior to application of the protective coating.





Pipe ends must remain free of protective coating to ensure they can be welded in the field.

plays a vital role in the performance of the end product. An important component to the success of the FBE process is high performance masking tape. “Tape is a vital part of the FBE process. This allows us to achieve quality cutbacks on every pipe,” said Swearingen, who has worked with FBE pipe for over 15 years.

Masking tape is applied to pipe ends after the heating phase to keep them free of protective coating, a necessity as the protective coating can interfere with the ability to weld pipes in the field.

“The tape that we use is as important as the fusion bonded powder itself,” suggested Norris, who has worked full-time in his family’s pipeline business since 1997. “The tape must be

manufactured within strict guidelines so that the performance is consistent.”

Over two years ago, Dura-Bond partnered with Shurtape Technologies, LLC, a leading manufacturer of pressure-sensitive tapes, to develop a tape specifically for use in the pipeline industry. The result was CP 901 High Performance Masking Tape.

“We worked hand-in-hand with Shurtape to make a tape that worked for both of our coating plants. These mills required a unique design and Shurtape was able to accomplish exactly what we needed,” said Norris. “This was done by being thorough, listening to our needs, and producing an extremely consistent product.”

First, and foremost, the tape needed to be able to endure the extreme conditions found in the corrosion-coating process, particularly high temperatures for short time durations. “The tape had to adhere

to steel pipe that is around 475 degrees,” explained Swearingen.

The tape also needed to unwind easily onto the hot pipes and hold strong throughout the process. “Adhesive failure will cause either a repair or worse, a rejected pipe,” explained Norris. “If the adhesive is not adequate enough to withstand the rigors of FBE application, the tape will become disbanded from the pipe and cause the ‘tail’ end of the pipe tape to come into contact with the uncured FBE. If the shear strength of the tape is inadequate, the same result could happen should the tape break during the application process.”

“These types of failures can be costly, especially as it could hinder the team from meeting the demands of its customers. If the tape fails, it slows down our process and adds extra work for us,” suggested Swearingen.



When the job is done, CP 901 removes cleanly and easily, leaving pipe ends residue-free.

Finally, it also needed to remove quickly and cleanly, leaving behind sharp lines with no residue.

CP 901 is designed to meet the demands of the industry. The tape's high-tack rubber-based adhesive system offers quick stick and strong adhesion for high-speed production processes, and it sticks well to itself to prevent coating damage due to loose tape ends. Its durable crepe backing resists charring up to 450-460 F for short time durations (1-2 minutes) while moving through the coating booth, and its splice-free feature means there is less worry about tape breakage.

When the job is done, CP 901 removes cleanly and leaves pipe ends residue-free.

For the team at Dura-Bond, CP 901 has been a success. "Our expectations are to deliver a performance product that is consistent and cost-effective for our application. Shurtape has exceeded our expectations from supply chain to product performance," suggested Norris.

Learn more about CP 901 high performance masking tape at Shurtape.com.



Dura-Bond Pipe

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