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## Dura-Bond Opens Pennsylvania ERW Steel Pipe Mill

The new Dura-Bond ERW steel pipe mill in McKeesport, Penn., sits on the original site of National Tube Works, which began production in 1872. After United States Steel acquired National Tube in 1901, the company continued to expand, and McKeesport became known as “The Tube City.” At one time, more pipe was produced in the city, than anywhere else in the world. In 1964 the ERW mill was built by U.S. Steel.

In 2013, U.S. Steel Tubular made massive investments in the plant to improve reliability, capability and quality. The mill’s entry area was renovated, and a modern drive installed. U.S. Steel also rewired the entire facility and added a programmable logic controller (PLC) system. The plant’s mill drives were upgraded in 2013 with AC motors, increasing power and improving dependability. A new edge miller was installed, and the shear upgraded. U.S. Steel also rebuilt the hydro-tester and added new tooling to accommodate all pipe within the plant’s outside diameter (OD) range.

“The addition of the McKeesport ERW pipe mill to the Dura-Bond family strengthens our position as a critical American manufacturer in the line pipe industry. Our range of steel pipe and pipe coatings now meet the requirements of most pipeline projects in North America,” according to Jason Norris, president, Dura-Bond Industries.

Today, this 317,000-square-foot plant employs advanced high-frequency electric resistance welding (HFW) technology and produces API 5L line pipe and ASTM certified steel pipe. Dura-Bond has made improvements that incorporate new technology with the plant’s existing functionality. These improvements can be found throughout the facility, from improved coil trimming capabilities to the PLC-controlled OD pipe stenciller.

Dura-Bond’s inline UT non-destructive testing inspects weld integrity.

Dura-Bond has also installed two leading-edge ultrasonic inspection systems that provide inline monitoring of the seam weld. A new pipe tracking system works in conjunction with sophisticated MTR tracking and tracing software to offer continuous monitoring of product. Additionally, the facility’s logistics capabilities have been updated to improve accessibility to major highway and rail connections.

The refurbished plant is now fully operational and has recently been awarded an API 5L Certification to manufacture ERW pipe in diameters from 8 5/8-inch through 20-inch, with lengths up to 80-foot. API-certified pipe must meet rigid quality guidelines as outlined in API Q1. The McKeesport facility’s quality system has been successfully audited and certified as API compliant. The quality of all ERW pipe is fully documented, and each pipe carries the API logo as infield verification.

The McKeesport pipe mill is strategically located near the company’s Duquesne, Penn., pipe coating facility. This high-capacity coating plant was built in 2012 to match the application of fusion-bonded epoxy (FBE) and abrasion resistant (ARO) pipe coatings to McKeesport’s steel pipe output. The company recently expanded the coating plant’s capability to economically load and shuttle trucks between the two mills. The company also controls all rail track within the manufacturing complex and monitors onsite logistics of pipe-carrying railcars. Both plant locations offer access to major highways, three railroads and barge transport.

Dura-Bond began coating fabricated steel and pipe in 1960 and has grown into one of North America’s leading line pipe producers and plant-applied pipe coating applicators. The company also maintains an advanced protective coating operation at its longitudinal submerged arc weld (LSAW) pipe manufacturing facility in Steelton, Penn., where it produces large OD line pipe from 24 to 42 inches in diameter.

The ERW pipe is produced by continuously forming flat steel and welding the longitudinal seam using high-frequency electric resistance welding. The process begins with flat steel passing through a series of forming rolls that transform it into a round pipe section. A high-frequency welder heats the edges of the rolled strip and pressure rollers then squeeze

the heated edges together to form a fusion weld. The weld is inspected by an ultrasonic non-destructive unit to assure precise adherence to API and ASTM specifications.

The weld seam is then normalized by heating it to 1,700°F to remove welding stresses and produce a uniform grain structure. Next, it is cooled and passes through the sizing mill. As the continuous length of pipe moves toward the mill's exit, a flying cut-off slices length of pipe to prescribed sizes without interrupting the production flow. Each pipe undergoes hydrostatic testing to ensure rated strength and weld integrity under pressure. The weld is ultrasonically inspected again, and the pipe body is fully examined by automated equipment.

Dura-Bond was founded in 1960 by J.M. Norris to provide corrosion protection services for manufacturers of steel products at the customers' facilities. In 1965, Dura-Bond established its headquarters and first plant-applied coating facility in the historic Western Pennsylvania town of Export. Today, four Dura-Bond manufacturing facilities are in Pennsylvania's energy-rich Marcellus-Utica Shale Region, and the company's products are used in construction projects throughout North America.

The company manufactures API steel line pipe for use in critical projects such as the Dominion Atlantic Coast Pipeline, Trans Canada Leach X-Press and the Williams Constitution Pipeline. Dura-Bond provided 550 miles of 36- and 42-inch steel pipe for the Dominion Project. This signature pipeline will encourage increased drilling and the buildout of adjacent midstream pipelines in smaller diameters up to 20 inches.

Each plant complements the others by allowing the company to serve a wide range of customer-specific requirements for steel pipe, protective pipe coatings and fabricated steel products, with each facility using distinct manufacturing processes.

Dura-Bond has a threefold approach that guides its manufacturing processes – SQP: safety, quality, productivity. Quality is critical to maintaining and expanding any company, and the company invests in mill upgrades and maintenance to remain ahead of increasing quality standards.

The Dura-Bond team understands that customer loyalty and trust need to be earned each day and with each project. The pipeline industry operates and maintains critical infrastructure across North America and product integrity and quality are not just appreciated, they are required. Dura-Bond makes it easy for customers to do business by providing solutions to issues and concerns before they become problems.

"The Dura-Bond team of professionals is dedicated to building a tradition of pipe manufacturing excellence. Talented individuals throughout the company, from mill operations to front office sales, are committed to maintaining Dura-Bond's reputation as a quality American pipe supplier and plant-applied coater. Our successful customer relationships are built on this tradition," said Adam Norris, of the Line Pipe and Coating Division.

Dura-Bond continues to be owned and managed by the third generation of the Norris family. The company maintains the founder's community-first practice of acquiring shuttered pipe manufacturing mills and reinvigorating Pennsylvania neighborhoods by providing job opportunities; the company currently employs about 500 at its Pennsylvania facilities.

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