

Hot Times at Jersey Shore Steel - Keeping Those T-Rails Rollin'

By David Kagan

A 2300-degree-Fahrenheit furnace, blinding blowtorches, massive magnets, colossal cranes, and deafening decibels are what're needed to turn old train rails (which are very strong steel because of their high carbon content) into steel "angle" at the Jersey Shore Steel Company in Jersey Shore.



(Photo by Dave Kagan)

For 70 years now, since John A. Schultz founded the company in 1938, the plant has heated, split, rolled and shaped "T-rails" (so named because their cross-sections look like the letter "T") into its angle-shaped product. It is used for bed frames and motion furniture (La-Z-Boy and Broyhill are big buyers), shelving uprights, scaffolding supports, orchard and vineyard stakes and trellises (California's famous wine industries purchase some), garage door supports, roadwork barricade legs, sign stands, and fence and newspaper posts.

Plant Superintendent Richard Delaney explained the interesting steps involved in the mill's operation to *Webb Weekly*.

First, the rails are brought either by train or truck from both domestic and foreign sources. Interestingly, Russia provides most of the latter, according to Delaney.

After the 33-foot lengths of rail are brought into the plant and placed onto the "conveyor line," they are measured and chalk-marked, and then sent down to the "breaker," a powerful and appropriately named machine that breaks each rail, with an accompanying din, into 11-foot sections. Then a Brobdingnagian magnet delivers them to the preparation area (charger), where they are aligned for entrance into the furnace.

Inside the roaring furnace the cold sections of steel are heated in three stages — first a "preheating" to about 1800 degrees F, followed by a "heating" to about 2200, ending with a "soaking" (where the rail is heated thoroughly throughout) to about 2300 degrees F. The rails, glowing bright yellow, are then discharged out the other end of the inferno.

Two cameras monitor the modern, computer-controlled furnace, one showing the rail coming in at the charge end, the other the blazing rail going out the discharge end.

"With the old furnace," Delaney said, "we had to have a guy called a fireman working in the adjacent furnace control room."

The new furnace can burn oil, natural gas, or landfill gas (methane). The latter, provided for over five years now via pipe laid from the **Wayne Township Landfill** only about a mile to the west, meets about 90% of the furnace's need these days. The arrangement "has worked out very well," according to Delaney.

"We take about everything they can give us; in fact, if it weren't for the **landfill gas (about one-third the price of natural gas)**, I don't know if we'd still be in business."

After heated to incandescence in the fiery furnace, the rails go through a high-pressurized washer that knocks any oxide scale off. Then they travel down to the "splitter," which separates each rail into three pieces — its head, web and flange (trains run on the head, the flange is the part that is set onto the railroad bed, and the web in the middle part of the rail).

Next, the 11-foot pieces are shuttled down one of two linear process lines to rollers, where they are squeezed, teased, cajoled and spread out to approximately 130-foot lengths. A machine called a "looper" does just that to each still yellow-red hot bar, a temporary vertical looping that keeps tension off the bars so that they don't break apart. Rolling machines with "knives" bend the bars in the middle along their lengths

permanently, shaping them into their recognizable angle forms. Then the cooled “angles” are fed into a machine that assures that they aren’t “bowed” along their lengths. Finally, they are cut into more than 500 different lengths, according to the desires of the customers.

Some of the angles are then bundled together and sent directly to the buyers, either by truck or by rail boxcars, the latter loadable even on a track extension into the plant itself. Others are transported to Jersey Shore Steel’s fabrication division in Montoursville, where punching, piercing, end-coping, painting and electro-coating options for customers are performed.

That first year of operation, back in 1938, approximately 15,000 tons of rail steel angle were produced. After the founder died in 1943, sons Charles and John A. Jr. took over, with the company expanding greatly under their leadership. Following their deaths in 1980 and 1981, respectively, a third generation duo, Jack and Peter Schultz, headed the business. In 1984, the company reached an all-time high production of 100,000 tons. And still under these two Schultzes, today’s annual capacity is now at 170,000 tons.

The plant has survived through some difficult times. It had to be rebuilt following a devastating fire in 1963. It recovered from the damaging, great Hurricane Agnes flood of June 1972. And it has dealt with some “tough competition” through the years from three other mills in the United States.

To stay competitive, Jersey Shore Steel made a \$10 million investment to revamp its production facility going into the 21st century. This has included the incorporation of automated rolling technology, the computer-controlled furnace, a control tower to monitor plant operations using sensors and cameras, and laser technology to continually measure the steel product for conformance to dimension specifications.

Plant Superintendent Delaney began working at Jersey Shore Steel back in 1978, then left after a year to attend Lycoming College — although he continued at the steel mill during holidays and vacations. After graduating with a bachelor’s degree in Political Science, he, interestingly enough and somewhat to his own bemusement because of such a degree, returned to employment at Jersey Shore Steel, where he has been happily ever since.

Employees seem to stay with the company. Many of the over 350 employees (Jersey Shore and Montoursville facilities combined) have stayed for decades. John Koch, a roller who now monitors plant operations from the new control tower, has been with the company for 33 years; Gary Stover, who works in the roll shop, for 32-and-a-half.

Delaney explained some recent changes in plant operation hours and in employee work schedules. “About a month ago,” he said, “we changed from a three-shift operation. Now we run 20 hours a day, shutting down from 5-9 p.m. Our mill guys work five weekday, eight-hour shifts; those in our finishing department and rail yard work four 10-hour days, with a day off during the week plus weekends.”

The company’s rail yard is said to have the largest fleet of locomotive cranes east of the Mississippi. Delaney noted, however, that the current supply of T-rail in the sprawling rail yard is down, due partly to the price of rail, which he called “sky-high.” He continued, “And we struggle to get it at over \$500 a ton — only a few years ago it was maybe \$300 a ton — because the three other U. S. mills are closer to the West Coast major sources of domestic rail.”

Some of newest aspects of Jersey Shore Steel Company’s operation include (1) a current switching over to a “new and better” main control room system, according to Delaney, (2) some “experimental runs” putting two pieces of angle back-to-back (for bed support systems for larger-sized beds), and (3) a new “C Channel” (reflecting its shape) rail steel post (for vineyard trellis, fence post, and sign post markets).

Challenges to the survival of Jersey Shore Steel Company include (1) the high price of T-rail, (2) its availability, especially domestically, (3) continuing competition from the three other U. S. mills, and (4) competition from international firms (for example, bed frames from China are being imported ready-for-sale, at prices less than Jersey Shore Steel can sell comparable frames for).

“We’re really struggling,” Delaney admitted. “We’re in a dog fight right now.” With its continuing Schultz family leadership, this important local industry is, despite the difficult times, celebrating its 70th anniversary year in 2008. Hopefully, customer knowledge of this longevity and of the company’s reputation, combined with the incorporation of the more efficient and most up-to-date technology available, will allow the Jersey Shore Steel Company to continue “rolling” at least another 70 years through the 21st century.

The story appears courtesy of Webb Weekly, Williamsport, PA" and also note that "David Kagan is a freelance writer and photographer living in the Jersey Shore area."