

ORX *CONTINUING A FAMILY TRADITION*



ORX employee Bob Gorman at work removing steel tires from their aluminum hubs on BART wheels.

By Scott Bogren

“The easier it is, the less we do it,” says Jim Brandimarte with a grin as he moves from the brightly lit engineering offices of ORX Railway Corporation in Tipton, Pa., to its state-of-the-art plant where passenger rail wheelsets, axles and trucks of all sizes and for all manner of rail systems around the country are built and rebuilt. “And as you’ll see as we tour the plant, we’re extremely busy.”

For Jim and his brother Glenn, building precision wheelsets for subways, commuter rail, light rail and Amtrak – including the Acela – is a continuation of the Brandimarte family’s three generations of dedication to the rail industry. That family history began more than a

century ago just a few miles from the Tipton plant in the highlands of central Pennsylvania in the small town of Gallitzin, along a famed stretch of rail known as the Horseshoe Curve.

Generations of Railroading

According to the Pennsylvania Railroad and the February 1954 edition of its publication, *Pennsy*, Giulio Brandimarte arrived in central Pennsylvania from Italy in 1903, and almost immediately started working along the railroad’s famed Allegheny Mountain passage known as the Horseshoe Curve – as a trackman, foreman and then general foreman. He would do so for the next 50 years. During this half century he

developed an eye for all the detail that safe railroading demands, an expertise he honed the only way he knew how: daily he walked more than 10 miles of track, attired in a dark three-piece suit and pipe perched in his teeth. In 1954, one of the curves on the slope, was actually renamed the *Brandimarte Curve*.

The respect for Giulio Brandimarte’s work along this vital section of Pennsylvania Railroad track was well chronicled. He was charged with examining ties, rail, ballast and more. Two generations later, Glenn and Jim Brandimarte today display a similar commitment to rail detail and precision of which their grandfather would be justifiably proud.

Just as Giulio led the Brandimarte

family into the rail business, it was his son – and Glenn and Jim’s father – Benjamin, or Benny – who honed that focus onto the steel wheels upon which every train rolls. Already more than two decades into his own career with the Pennsylvania Railroad, Benny was appointed general foreman of the wheel shop at the then newly-built Samuel Rea Shop in Holidaysburg, Pa, just south of Altoona. It was at this time that he is widely recognized as having revolutionized the production of wheels, axles and bearings, bringing new standards of precision and production to the craft. Working through the Penn Central and Conrail era, Benny retired in 1980, but he didn’t leave the industry. Later that year, Benny began his second career in railroading, as he and Glenn launched ORX Railway Corporation, tapping in the Brandimarte family’s unprecedented American rail legacy.

From Freight to Passenger

In its beginning, ORX focused almost exclusively on the freight side of the rail business for its wheelsets. It wasn’t until representatives from New York City’s subway car manufacturer approached Glenn Brandimarte, that its passenger side of the business began to flourish.

“Someone at Morrison Knudsen got my name and they needed some wheels,” recalls Glenn Brandimarte, “so I visited them and let them know what we could do. For the past five years, we’ve mounted all the wheels for New York City’s new car orders.”

The New York contract was the start of a flourishing business of building – and rebuilding wheels. A tour of the ORX plant highlights just how successful they have been. Thousands of stockpiled parts and supplies and finished products are organized around the plant with such destinations as BART in San Francisco, the previously mentioned New York City Metropolitan Transportation Authority, Washington



Photo courtesy of ORX

Giulio Brandimarte (above) surveys his territory on the Horseshoe Curve – which was later renamed in his honor – in this photo from the February 1954 edition of *The Pennsy* magazine. Today, his grandsons Jim (left) and Glenn continue the family’s railroading tradition with ORX.





Jim McClellan (left), in his 27th year at ORX, at the controls of a CNC boring machine.

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- Glenn Brandimarte, ORX

Metro, MARTA in Atlanta, New Jersey Transit, Los Angeles MTA, Amtrak and many more.

Flatbed trucks loaded with wheels line-up outside the plant, three or four deep, ready to discharge their loads to be entered into the well-orchestrated ORX plant. ORX inspectors check each set upon entry into the facility, measuring wheel rim and flange wear to determine the wheel’s suitability for reuse.

A Visit to Tipton

At the back end of an industrial park, located along the old Pennsylvania Railroad mainline, the ORX plant is going through a significant addition. A second 60,000 square-foot building is now complete and being prepped and stocked. It effectively doubled ORX’s footprint and will be used to point the company in new directions.

“This second building will give us the ability to better systematize our work and to further our entry into the wheel truck market,” says Jim Brandimarte as he peers around the newly constructed space. The new space forms a striking contrast to ORX’s original facility which hums consistently with the activity of

employees and machinery, and seems bursting with phalanxes of wheelsets lined-up neatly and gleaming rows of silver axles.

In the new building, at the end of one of the aisles of stocked goods sits a wheelset tagged with the acronym “PATH FAI,” which stands for First Article Inspection. The concept highlights a unique aspect of ORX’s work, and the business environment in which they thrive.

“For every major order,” explains Jim Brandimarte, “we develop a First Article Inspection which is the complete product, as will be fully delivered. All of the interested parties – rail systems, contractors and subcontractors – must agree to the First Article Inspection before we move ahead to production. Once the First Article is done, things tend to go smoothly.”

But getting to that agreement is not simple. The nature of the modern passenger rail manufacturing industry is such that competing firms – due to acquisitions and mergers – often end up working together on an individual job due to the nature of the contracts and the complexity of a wheelset. All of these interests are represented when the First Article Inspection is completed,

each looking to maintain its own competitive advantage. Sometimes, the end user or actual rail operator is ORX’s customer, other times – and more likely – the car builder is the actual customer. It’s a situation ORX took into account with the design of its new facility.

“Another benefit of our new facility is that it includes the space our customers need to meet privately while here on inspections,” says Brandimarte. “They may be working together on this particular job, but competing for another, so they need their space.”

On the day *RAIL Magazine* visited ORX, inspectors from the New York City Metropolitan Transit Authority and Alstom – their subway car builder – were on-site in Tipton agreeing upon a First Article Inspection before proceeding on a large order of subway wheels. The inspectors have the run of the facility, and can be seen conducting noise and spin tests as well as training their calipers on the gauge of finished sets, and watching wheels pressed onto axles.

“Nothing clears our facility unless they say it’s okay,” says Jim Brandimarte of the inspectors.

ORX employs a variety of high-

tech machinery and skilled operators in order to produce its wheels, wheelsets, axles, bearings and more. From powerful presses and boring machines to precision grinders and lathes, it is clear that the work of producing passenger rail wheelsets requires a significant degree of expertise and investment in high-tech equipment and machines.

“We invest a lot in our tools and machinery,” says Jim Brandimarte, “and we invest more in our employees and their training.”

At each of the work stations, ORX employees not only operate the intricate machinery, they also take copious notes that follow each wheelset as part of its path through the plant.

“Our employees and their expertise are central to ORX’s success, says Glenn Brandimarte. “About half of them have been with us for over twenty years.”

“Our boring equipment is as precise as it comes,” says ORX machinist Tim McMaster. “If we have to skim .003-inch out of a bore, we can do it.”

A Look to the Future

The flags of six countries will soon fly in a tidy arrangement over the new entrance to ORX’s facility. The flags are meant to signify the international nature of their passenger rail business, but they might just as well exemplify the expertise, quality and world prominence of ORX.

“We have the technical capacity and the expertise with our great staff of engineers and operators to do whatever our customers need in the rail wheel business,” says Glenn Brandimarte. “We think more and more American cities are going to turn to passenger rail in the future to help them with congestion and to efficiently move people and we’re glad they’ll have an American company to turn to for our products.”



Scott Dively (above) assembles a wheel set for an Amtrak Acela coach car. Acela wheel sets are unique in North America due to their three brake discs.



Long Island Railroad M-7 railcar wheel sets with disc brakes are mounted to the wheels (above). Below, the first wheel set assembled for PATH’s new PA-5 vehicles is distinguished as the First Article Inspection (FAI), which will be the indisputable template for all other wheel sets assembled under the contract. It will also be the last wheel set delivered to PATH.

