

## Charleston Manufacturers Focus on Training Current and Future Workers

Manufacturers in the Charleston, S.C., area are using lean methods to make their facilities more competitive and supporting apprenticeships to help meet the need for skilled workers.

**Michele Nash-Hoff**

After visiting the Charleston Port terminal and the Mercedes-Benz Vans Training Center, I had the pleasure of visiting several manufacturers during my two-day trip to the Charleston metro area. We first visited Ingevity in North Charleston, where I met Michael Wilson, president and CEO, Dan Gallagher, vice president, Investor Relations; Eric Walmet, Charleston plant manager; Jack Maurer, director, Communications and Brand Management; and Laura Woodcock, manager, P.R.

Ingevity is a leading global manufacturer of specialty chemicals and high-performance carbon materials that are used in a variety of demanding applications, including asphalt paving, oil exploration and production, agrochemicals, adhesives, lubricants, publication inks, and automotive components that reduce gasoline vapor emissions. The company creates high value-added products from renewable raw materials. The name is “coined” from the meaning of four words: genuine, ingenuity, innovation, and longevity.

Ingevity was spun off in May 2016 from WestRock, which has a long history and many name changes going all the way back to 1846 when it was founded as Ellis, Chaffin & Co. Ingevity is headquartered in North Charleston, and has manufacturing plants in South Carolina, Georgia, Kentucky, Louisiana, and Virginia, as well as two in China. Ingevity has four sites in the Charleston region: its headquarters with 205 employees, the manufacturing plant with 214 employees, the Ashley Center with 109 employees, and the Innovation Center with six employees for a total of 534 employees.

Michael Wilson said, “We recently announced an agreement to acquire Georgia-Pacific’s pine chemicals business for \$315 million. This will give us a stronger, more competitive pine chemicals business. We also signed a supply agreement with Georgia-Pacific which in combination with our agreement with WestRock, will put 70% of our crude tall oil requirements under long-term contract. There is little customer overlap between the two companies. And, because we do business in 65



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countries, we believe we can accelerate global growth for the Georgia-Pacific products.”

When I asked him his impression of the manufacturing sector in the region, he responded, “The manufacturing base is very diversified. The business climate of South Carolina is world class. The mindset of the government has been beneficial. It is a right to work state and has low taxes.”

Eric Walmet gave us a tour of the Charleston plant and Innovation Center, where we saw some of the activated carbon end-products made by Ingevity. The products include carbon honeycombs, granular carbons, and shaped carbons used to reduce automotive gasoline emissions. The activated carbon is made by combining sawdust and acid through a proprietary process.

I could see that the plant was laid out on the basis of a lean value stream mapping event, and there were the obvious signs of the application of lean tools and principles on the shop floor.

### IFA North America on the Move

Our next stop was IFA North America in nearby Ladson. We met with Mauro Amarante, president and CEO, and Ryan Loveless, training

coordinator. IFA North America LLC, formerly known as MTU Drive Shafts LLC., was founded in 2002 and operates as a subsidiary of the German company IFA - Holding GmbH.

IFA is one of the world's leading and largest suppliers of drive shafts and side shafts for the automotive industry. In North America, IFA produces more than 2 million drive shafts a year and employs more than 600 people.

Amarante said he has been in the U.S. 11 years, having previously lived in Germany, Brazil and Verona, Italy where he was born and raised. IFA is currently building a new plant in Berkeley County (still in the Charleston metro area) that will be 234,000 sq. ft., where they will be manufacturing constant velocity joints. They plan to consolidate all their operations and expand to about 400,000 sq. ft. by 2023.

Amarante said, "South Carolina is very business oriented, and former Gov. Nikki Haley was very business focused. We have all the business conditions we need here to secure our workforce. We were one of the partners with VTL and three other companies to start an apprenticeship program three years ago to teach basic manufacturing skills like math, statistics, gauging, and machine operations."

Loveless gave us the plant tour where we watched their production team turn purchased metal tubes into several designs of drive shafts. Loveless said, "In addition to our full-time employees, we utilize about 120 temporary workers from a private agency. These people work for us for about three to six months, and then we select the best workers to add to our full-time employee base. We would like to reduce the number of temporary employees. This is why we are investing time and money into the apprenticeship program to grow our future employment pool."

Again, I saw the application of lean tools and principles throughout the shop floor. We even had to watch a safety video before we got to take the plant tour, and I was glad I was wearing my own Sears Die Hard steel-toed shoes instead of having to wear their guest shoes. Of course, as an automotive Tier 1 and Tier 2 supplier, they are ISO 9001:2008 and TS 16949 certified.

### **VTL Group Invests in Apprentices**

Next, we visited the VTL Group, also in Ladson, where we met with Jeff Teague, general manager, and Brian Glasshof, account manager. Teague said, "The company was started in 1919 and changed its name to Valeo Transmission Ltd. in 1997. The management team - Bruno Joan, Chris Elliott, and a third man who has since been bought out and retired - did a leveraged buyout in 2001. Chris started at the company as an apprentice when he was a young man.

He said, "I started in November 2011 when the company was in a turn-around mode after the recession. I came from the Greenville/Spartanburg area. We are now running in a very tight workforce market because of the low unemployment.

"We specialize in the design, development, prototyping, and manufacture of high precision components and sub-assemblies for automotive powertrain applications. We have expanded by winning several new contracts. This plant makes variable geometry turbo parts for Cummins and make engine components for Borg Warner. Everything we do is built around CAFÉ standards for emissions. VTL Group employs 275 globally, and has 48 employees in this

Charleston plant."

He went on to tell me about the genesis of the region's youth apprenticeship program. "We were one of the six companies that showed up at a meeting in 2013 to discuss starting an apprenticeship program, which launched in 2014. We had a signing day event for 11 students. Now, this fall we'll have 100 in the program. Apprentices can start when they are 16 years old in high school. There are now nine industry sectors and 122 companies in the apprenticeship program. Industrial mechanics is the most requested training."

Two of their new apprentices were brought in to meet me: John Cody Geiger and Ty'Celia Young. Both are high school students. Ty'Celia said, "My high school engineering teacher encouraged me to apply when I was a junior." Cody said, "I got an email from my high school principal and applied as a senior, so I graduated before starting at VTL."

They go to high school in the morning, and then take industry-specific college courses a couple afternoons, and go to work the other afternoons during the school year. In the summer, they work full-time. When they complete the apprenticeship program, they will be certified as journeymen by the Department of Labor. They will also have two years of paid work experience on their resume. VTL has hired two past apprentices as full-time employees.

There are 26 schools in the apprenticeship program - public high schools, as well as charter schools and private schools. The Charleston Metro Chamber of Commerce pays for the tuition, tools and supplies for all of the students, so the students are getting their training free of charge. The Charleston Metro Chamber focuses on in-demand occupations. Besides advanced manufacturing, Charleston is also becoming an IT hub.

When I asked about the curriculum, I was told that the community colleges already had curriculum, which the companies helped modify to meet their needs. The program has two main goals:

- Fill the critical workforce needs.
- Monitor the next generation of students to keep them in the region.

Apprenticeship training is not all the training provided at VTL. Every employee is allowed one hour a week for training, but it is up to them to take advantage of the opportunity. VTL uses ToolingU training modules for their in-house training program.

Teague gave us the plant tour, and I was amazed at how many robots they had doing various manufacturing processes and moving parts from one operation to another. No wonder that only 48 employees at this plant are able to maintain the work flow required of a Tier 1 and Tier 2 automotive supplier. The parts I saw in process were variable cam timing engine components and turbocharger components. Teague showed me their lean scoreboard section where there are visual displays of all the metrics required for a lean company. Naturally, VTL is also ISO 9001:2008 and TS 16949 certified.

From these tours, I could see why world class companies are choosing to locate or expand in the Charleston, S.C. region. A very favorable business climate, excellent transportation options by truck, rail, and ship for both national and international destinations, a highly skilled, trained workforce, and apprenticeship programs make the region a desirable location for many manufacturing sectors, especially those that export their products.