

New Press Line to Increase Capacity by 30%

Interview with Steve Schabel, Alexandria Industries

Editor's Note: Top Extruders in North America is a new series of interviews, highlighting the growth, changes, and challenges facing the extrusion industry from the perspectives of major extruders in the U.S.

Alexandria Industries, headquartered in Alexandria, MN, is a multifaceted manufacturer of extruded aluminum, capable of providing engineered products through its extrusion, precision machining, finishing, and assembly operations. In this interview, Steve Schabel, chief sales and marketing officer of Alexandria Industries, provides an overview of the company's capabilities and how its extrusion business is growing to meet customer specifications through the installation of a new press line.



Steve Schabel.

Schabel began working in the aluminum extrusion industry in the early 2000s, while earning his master's degree in business administration with a concentration on marketing management. In addition to his role as chief sales and marketing officer, he is a member of the Aluminum Extruders Council (AEC), having served on a number of the organization's committees through which he provides support helping to grow and protect the U.S. industry.

What is the current status of Alexandria's aluminum extrusion business? How many plants and extrusion presses do you operate?

Alexandria Industries has five facilities—two in Alexandria, MN, and one each in Wheaton, MN, Indianapolis, IN, and Carrollton, TX. We operate a total of four extrusion presses, with one 10 inch press at our Indianapolis facility and three extrusion presses—one 3.5 inch press and two 7 inch presses—at our Alexandria facility on 401 Country Road 22NW. We extrude 6000 series alloys, including: 6005A, 6060, 6061, 6063, 6082, 6101, 6463, and 6560, and we can extrude specialized automotive alloys upon request. On average approximately 30% of our raw material is remelt aluminum from the best producers in North America.

We serve a number of vertical markets including renewable energy, medical, marine, highway and transportation, automotive, firearms, and lighting technologies. Together, these markets make up 49% of our business, while various other industries and markets make up the other 51%. Our customers are located throughout the U.S., Mexico, Canada, Europe, China, and other countries that are further developing their technologies and manufacturing practices.

How has your company been able to reach its position as a leading extruder in North America? What do you feel are the keys to your company's success?

We provide customers a comprehensive and multifaceted set of manufacturing services, from aluminum extrusion to fabrication and finishing, along with a diverse capability of assembly and additive manufacturing services. These mutually complementary capabilities bring value to our customers' product manufacturing needs while saving them time and money by eliminating the need to manage complex supply chains with several different suppliers and processes.

We create the best manufacturing and engineering solutions for our customers' needs, often developing custom-engineered systems, processes, and machines that make a difference in their product development. As such, we customize our processes and even design and build new machines to enhance manufacturability of a specific product.

Our skilled workforce is a key benefit for us. As an organization, staying focused on continuous improvement, including offering employees on-the-job and offsite training opportunities in machining, tooling, robotics, automation, programming, lean manufacturing disciplines, and more. We also provide training on soft skills, such as leadership, business acumen, and StrengthsFinder®.

In general, we live by our values (integrity, faith, mutual respect, employee well-being, and commitment to excellence) and have a servant leadership mindset. We have specifically outlined the behaviors that define each value and expect our employees to live by these values. One of the first things we look for in hiring prospective employees is whether their values align with ours.

How does your company add value to its aluminum extrusion operations?

We provide a comprehensive and multifaceted set of manufacturing services in addition to aluminum extrusion. These include precision machining (such as CNC, turning, grinding, etc.), stretch forming and bending, plastic injection and foam molding, finishing, complex heat sinks, TIG/MIG welding, and a diverse range of assembly services. Our other capabilities include various custom fabrication and finishing services, such as dry film lubricating and laser engraving.

What sorts of extrusion die technologies does your company implement? Do you source your dies from an outside vendor and/or do you manufacture them in-house?

We source our dies from a few different vendors, both domestically and internationally. Our in-house die tool services include 14 die tool experts who work around the clock supporting our extrusion teams (and customers) with die design support and ongoing die maintenance. The die team works to understand a product's end use, lifecycle, and functionality needs, as well as mating components, features, and dimensioning scheme to create a die design that is manufacturable. We use advanced inspection and vision measurement tools to track die tooling wear.

We use customized, made-for-the-shape profiles, die plates, and backers for each extrusion shape. This customized die stack provides crucial control against flexing on the face of the die plate during the extrusion process. The combination also increases the life of a die stack, saving customers time and money replacing worn dies. We also use custom bolsters for some product shapes that require form-fitting bolsters.

Alexandria recently purchased a new extrusion press. Can you tell us a bit about the expansion project and how it is progressing?

The expansion includes 18,500 sq ft of additional space, including offices and an additional 7,350 sq ft manufacturing space. A new main entrance to our business and reception area will be constructed to enhance the experience for our customers and vendors.

The manufacturing area will include a new extrusion press line from Presezzi Extrusion. We are installing a 7 inch, 2,250 ton front-loading press with a working pressure of 3,450 PSI. The line also includes an automated log storage system with capacity of ~500,000 lbs of logs, dual "ZPE" magnetic billet heaters (the first in the U.S. and the fifth in the world), a high intensity water/air cooling system, dual finish saws, an automated profile stacker, and a complete safety system with interlocked gates surrounding the entire perimeter of equipment.

Thus far, we have demolished the old offices for conversion to manufacturing space and completed the external structure (frame, roof, walls, and doors) and concrete (inside flooring and outside sidewalks, entrances, and curbing). We have built a new data center for our company's IT/IS systems and successfully moved all network data to the new center. We are relocating our manufacturing support functions (e.g., engineering, customer service, drafting/design, engineering, quality, sales/marketing, accounting, etc.), putting complementary groups close together to expedite customer orders and vendor needs.

Our press team recently visited Presezzi in Italy to see the newly assembled press. Presezzi will begin shipping the press to Alexandria, MN, in cargo containers over the course of Q1-Q2 2020. We anticipate the new press will be operational in mid 2020. In the meantime, our extrusion employees will visit and train with another extruder with the same new press.

How will this project help to improve production efficiency, quality, and specification of the profiles the company produces?

With the new press, we will be able to increase our aluminum extrusion capabilities, extrude more complex profile features, and hold tighter tolerances using various alloys. We will be able to push harder alloys, opening up our access to new market opportunities. The automated log handling and washing system will increase production efficiencies and extrusion quality. Overall, we'll gain an extra 30% in extrusion capacity, specifically at our Alexandria, MN facility.

What sustainability measures does your company have in place within your facilities?

We have implemented LEDs to replace all the varieties of different lighting that we previously had in most of our manufacturing facilities. We also have a water reclamation system in our extrusion facilities to reduce water consumption and waste. New extrusion technologies and equipment installs have and will continue to reduce our electrical, gas, oil, and water consumption. A goal for 2019/2020 has been value engineering, electrical, HVAC, and other utility improvements in the construction planning process of our manufacturing plant expansion.

How does your company ensure the safety and health of your employees? What management techniques are implemented to promote a culture of safety?

We employ the STOP® behavior-based safety observation program developed by DuPont. We also perform mandatory training and a bi-weekly senior management safety review board to implement corporate-wide improvements to our manufacturing environments. Employees sign our Safety Statement (banner) to signify their commitment to safety.

How has the manufacture and supply of aluminum extrusions in North America changed over the past decade? What do you predict for the future of the industry?

Approximately ten years ago, extrusions from China were flooding our country, undercutting U.S. prices and causing material injury to the U.S. industry. In 2011, the U.S. Department of Justice imposed anti-dumping and countervailing duties on certain aluminum extrusions coming from China. This legal maneuver helped save the U.S. aluminum extrusion industry. Representatives from the U.S. aluminum industry continue to work together to garner ongoing government support for the duties covering aluminum extrusions from China.

The Section 232 and subsequent tariffs on all aluminum imports has had some positive and some negative impact on the supply of extrusions. When the 10% tariff on all imported aluminum came into effect, it was an extreme challenge for some U.S. extruders, who relied on aluminum from UC Rusal (and other international companies), as they struggled to get the raw material. Since the initial implementation of tariffs, the government has allowed several exceptions on specific aluminum products and smelters.

Regarding the future outlook, if our current U.S. administration continues to impose tariffs to level the playing field and build back American business, we believe that certain international billet supply could be impacted and that manufacturing, specifically extrusion (based on growing demand), will increase in the U.S. This will benefit the U.S. economy, unemployment, and domestic investments to meet the growing demand available to U.S. manufacturers.

How stable would you say the North American aluminum extrusion industry is at the moment? What are the current challenges and growth opportunities?

There has been some volatility over the last five years, with significant growth brought on by an extremely strong economy, along with tariffs applied on imports from countries that were growing significantly with below-market-priced products. Although the economy is stable and the financial markets are growing, we have witnessed customers tightening their levels of inventories and becoming a bit leaner in their raw material procurement strategies. The industry's outlook appears stable, although not significant in terms of the growth we witnessed in 2015 and 2016, but a nice steady growth trend going forward.

There's a bit of a challenge in that global demand for aluminum has declined for the first time in ten years (down 0.4% in 2019) and is expected to be up only 1.8% in 2020 (source: AEC.org). However, growth opportunities are continuing in automotive, solar, medical, and B&C.

How much has the growth in the use of aluminum extrusion for automotive impacted the industry?

Recent growth in North America regarding the use of aluminum extrusion in automotive applications has increased substantially. This is due in part to OEMs wanting to focus on lightweighting their vehicles to make them more energy efficient. OEMs and suppliers are aggressively seeking, researching, and testing components they can convert from steel to advancing high-strength aluminum. Aluminum extrusion is an ideal product for many automotive components. Its formability, light weight, unique design features, and ease of making design changes for future product iterations make aluminum extrusion the perfect fit for many automotive component applications.

How will your company's aluminum extrusion business continue to thrive in years to come?

Our new press will allow us to increase our extrusion capacity by 30%, enabling us to produce much higher volumes and attract larger programs in the automotive, marine, and renewable energy markets. ■