

# Vitex Grows Capacity and Capabilities

## *Auxiliary System Upgrades*

**V**itex Extrusion, LLC in Franklin, NH, is an independent extrusion company with extensive value-added capabilities. In recent years, the company has implemented an integrated aluminum manufacturing approach, including machining operations and updated extrusion process technology, in order to achieve success as a regional manufacturing company. This included the installation and start-up of a new 8 inch, 2,750 ton Presezzi Extrusion press with a Granco Clark handling system in 2011. On its two extrusion presses—the second is an older 9 inch press—the company extruded around 31 million lbs of aluminum in 2016.

Productivity on the 8 inch press has grown significantly since start-up, with 95% of total production currently focused on that line. Andy Curland, president of Vitex, cites support from Bill Dixon of QED Extrusion Consultants and the installation of an Optalex press optimization system in December 2015 as key factors to this growth. With the continued increase in production speeds on the 8 inch line, the company realized that this press output was far exceeding the original quenching system's capabilities.

During the spring of 2015, Vitex initiated a detailed evaluation of two quench systems as possible replacements. Both systems were highly recommended by several other extruders and each offered a significant boost in productivity and capabilities. "We chose the Presezzi quench system because of the company's strong and continuing technical support following our press installation start-up period," said Curland. "My team sees Presezzi's technical people more as a business partner, rather than a vendor."

Along with the new quench system, Vitex also looked into installing a new profile stacking system for the 8 inch press. "The incorporation of a stacker system into our new press line was a consideration from the beginning of the press project, however, due to concerns about our footprint limitations and management bandwidth to handle more projects, we decided to put it on hold," explained Curland. "While finalizing the contract for the new quench, Presezzi's technical team in Italy and the U.S. created a clear visualization on why a stacker system with integrated scrap chopping equipment was essential to realize the line's full production potential."

During a seven-day period in late November 2015, the Presezzi team installed and assisted in the start-up of the new quench and stacker systems, representing a \$1.5 million investment. "Overall my business is very happy with both equipment installs," said Curland. "The new quench system has supported significant press speed increases for both 6061 alloys and a number of heavy wall and specialty-shape 6063 and 6005 profiles."

The new Presezzi HECS system allows for immediate quench of an aluminum extrusion profile using high velocity, multi-sided air and water quenching that puts out over 600 gallons per minute of water at nearly 130 lbs per square inch. Faster cooling preserves the profile characteristics, mechanical properties, and tolerances, while causing minimal distortions. "The new quenching system is three times more powerful than our prior system, allowing us to cool profiles faster and accelerate our



Figure 1. Automated profile stacking system in the foreground with the newly installed lineal packing system behind.

entire production process," said Curland. "Faster cooling also allows greater control over the mechanical properties of an extrusion, enabling us to meet more stringent requirements of certain industries, such as automotive."

The new profile stacking system automates the company's process of off-loading profiles to the aging racks. By moving to a fully automated process, the potential for damage to extrusion surfaces was reduced and throughput increased.

Following the quench and stacker installs, Vitex initiated a third press line project—the installation of a Presezzi automated lineal packing system (Figure 1), which would be integrated with the profile stacking system. The new packing line is being installed in two phases. The first phase was completed in January 2017, and the second is scheduled for completion in June 2017.

"The Presezzi technical team in their Profile Automation division worked with our management staff for over 14 months, designing a system that would address our concerns," said Curland. These concerns included: reducing labor input and physical demands, increasing the pounds packed per hour, providing flexibility for a myriad of customer specific packaging requirements, automating rack movement, fitting within the plant's limited footprint, and mitigating use of corrugated sheets. "Although we're still in the early stages of starting on the new pack line, we are very optimistic about anticipated results," he said.

In addition to the three major press line upgrades mentioned, Vitex has invested in a number of other plant projects over the last year and a half. For example, the company installed a second aging oven in September and a new billet furnace in October, both from Belco Industries. At the same time, its value-added division completed the acquisition and start-up of a twin spindle CNC machining center with a working envelope of 6 ft x 12 ft. Curland explained, "Our business strategy is to continue to grow capacity and capabilities in a measured manner—for both extrusion and value-added capabilities."