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Western New York's hottest industry

Ceramics manufacturing has been part of the region's industrial DNA for more than 100 years and business is still heating up



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The ceramics manufacturing sector in Western New York hasn't changed much in the last century but demand for those consumable products by a hungry global market has plants stepping up production.

What's good about being in the industry, said George Bilkey, president of TAM Ceramics LLC, is that customers run out of his products and need more. So every month TAM produces 1 million pounds of powder and grain forms of zircon, zirconia and titanates – all a class of titanium oxides. And there's opportunity to make more.

"Everything we sell is consumable," Bilkey said. "Brake pads, bricks and welding wires all wear and need to be replaced. And every golf club that's made, the ceramic mold is destroyed and can't be reused."

His company is planning an \$8 million expansion to capture a larger share of the brake-pad market and to make space where TAM can recycle rare earth metals. Adding staff is part of the plan.

Other ceramics manufacturers have hired, acquired companies and expanded to gain stronger footholds in new and existing markets. Such companies as TAM and Saint-Gobain Ceramic Materials produce raw materials that come in powders, grains or small rocks.

TAM sells to manufacturers that create portions of golf clubs, artificial hips, jet skis and guns, as well as furnace bricks for glass and steel manufacturing.

Over the next three years, Bilkey said, he wants to hire 40, bringing total employment to 100. He said 30 will be plant personnel and the rest will be ceramic engineers.

"We'll be selling more through our existing worldwide networks, as well as expanding those networks," he said.

The biggest growth opportunity is to create more ceramic raw material for production of brake pads, which TAM has been supporting for decades, he said.

"Europe, the U.S. and other countries are moving toward ceramic and away from metallic and semi-metallic pads," Bilkey said.

As metallic and semi-metallic pads wear, they leave a residue that's considered dangerous to the environment; ceramic pads do not, he said.

Companies increasing capacity

The local ceramics industry, plus a handful of companies in related industries, are concentrated here because of Niagara Falls' power and water supply. Another plus is the ability to support the steel industry.

Besides TAM, which was founded in the late 1800s, there's the French company Saint-Gobain, which dates to 1885. Saint-Gobain is known for construction products, high-performance materials, packaging and flat glass. The North American locations generate \$7.9 billion in revenue. Six Saint-Gobain plants are in Western New York: Amherst, Grand Island, Albion, Buffalo and two in Niagara County.

The facility at 6660 Walmore Road in Wheatfield processes aluminum oxide to make grains. These are called grits, which range from 16 (larger grits) to 220 (smaller) and are sold to customers who turn them into abrasive grinding wheels or sandpaper. Customers also create

products for aerospace, automotive and heavy industry. There isn't one single product that presents the best opportunity for growth and increased sales.

"They all have their niches, or their applications, so there's not one leading the charge," said plant manager Tim Vitorino, adding that the company grows every year. "We are busy and looking to increase capacity."

He said two to four machine operators may be hired this year by the Falls ceramic operation, which employs 65.

In 1996, Saint-Gobain purchased Carborundum, which was founded in 1890 and moved to Niagara Falls in 1895. Carborundum manufactured advanced ceramic abrasives.

[Unifrax](#) LLC began as a division of Carborundum. In 2013, after outgrowing office space, Unifrax moved from Niagara Falls to a new headquarters and R&D lab in Tonawanda to be closer to its Fire Tower Drive plant. Last year, Unifrax purchased a German glass fiber manufacturer to complement its own processes and products.

Unifrax' Fiberfrax product is a lightweight, corrosion-resistant ceramic fiber used as high-temperature insulation in various industries. At I Squared Element Co. Inc. in Akron, where silicon carbide ceramic heating elements are made for kilns and furnaces, plant manager Doug White said the company plans a foray into lithium battery processing.

"It's a growing area and a challenge for heating elements," said White, adding that the plant underwent a \$1.5 million, 3,600-square-foot expansion two years ago.

From a business standpoint, overseas competition is an issue.

"Thirty-five percent of our business is offshore, compared to 10 years ago, when it was 5 to 10 percent," said company founder and President Jack Davis.

The 50-year-old company is the only U.S. manufacturer of silicon carbide heating elements, he said.

"I'm chasing my industries offshore. The appliance, toy and electronics industries are now all overseas," Davis said. "We have lost half the industries that would use our product. We still sell to them in the U.S., but it's not growing. It's much smaller here."

He said Japan is his largest customer. But with the yen becoming cheaper, that could hurt business.

"To combat that, we have cut prices, which gets harder and harder because at some point you can't anymore," he said.