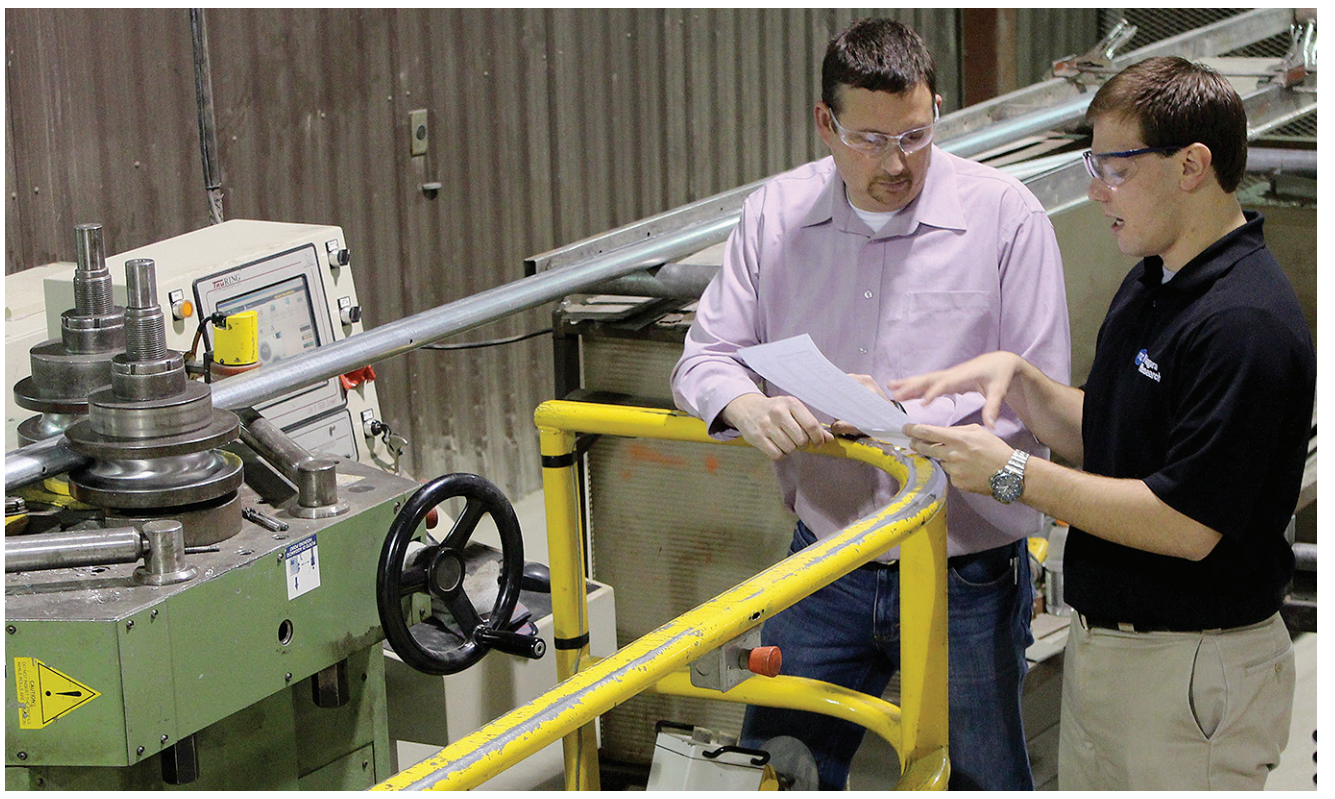
Niagara College research team creates future of efficiency for GGS Structures

BY CAROLYN MULLIN
NIAGARA RESEARCH

For the past 35 years, GGS Structures Inc. has been a world-class designer, manufacturer, and installer of commercial greenhouse structures. Specializing in commercial greenhouse design, industrial greenhouse manufacturing and commercial greenhouse construction, GGS greenhouses are built to last.

But while the company has the reputation and the reward of success for its many clients served, GGS wanted to look inwardly at ways to improve the efficiency of its own manufacturing process.

The Vineland-based company turned to the experts at the Industry Innovation Centre at Niagara (IIC@N), the advanced manufacturing centre operated by Niagara College's Niagara Research. Through IIC@N, Niagara Research works with small- and medium-sized businesses to meet their innovation goals, and to keep them competitive. With funding from various provincial and federal agencies, current students and recent graduates are hired to work alongside expert faculty to help industry partners leap forward in the marketplace.



Kerry Dryer, left, technology manager at GGS Structures Inc., and Mike Holderney, senior research associate with the Industry Innovation Centre at Niagara College, discuss lean manufacturing principles aimed at maximizing production efficiency at the GGS facility in Vineland. /PHOTO NIAGARA RESEARCH

During the project, the IIC@N team conducted research on GGS's current manufacturing process, and, using lean manufacturing principles, identified opportunities to streamline specific activities. For example, they designed and implemented a clamping fixture to clamp and remove aluminium parts in process, which has reduced manufacturing time by 15 per cent on these parts. The team also created a set of standard operating procedures to allow for consistency and efficiency in operations.

"We have fully implemented one solution, and have a request for quote out for the design of a new drill line," notes Leigh Coulter, president, GGS Structures Inc. "Working together these five months has definitely opened our eyes to new possibilities, and everyone at GGS has benefitted." In fact, based on the recommendations, GGS is undertaking an investment of up to $150,000 in equipment with an expected rate of return of just six months.

"When we started the project with Niagara College we did not know what to expect. The more we learn about the facilities and skills that the mechanical engineering students are being taught, the more impressed we are," adds Kerry Dryer, technology manager at GGS. "I already have a list of future projects that I want to work on with the College."

This project was made possible with funding from the Federal Economic Development Agency of Southern Ontario's Prosperity Initiative.

Niagara College, through its Research and Innovation Division, will continue to support collaborative research projects in various disciplines that may involve product and process applied research, engineering design, technology development, product testing, proof of concept, and piloting and problem solving. Nearby small- and medium-sized businesses can benefit from gaining access to the College's adept faculty, students, and recent graduates to explore opportunities for innovation.

To learn more about partnership opportunities with Niagara Research, contact research@niagaracollege.ca or visit www.NiagaraCollege.ca/Research.