



Collaboration with local school solves ongoing problem

Calumet, MI – OcuGlass, an acid-etched glass manufacturer located in the Houghton County Airport Park, has found a unique solution to a complex problem. The company was having to repeatedly repair or replace a key piece of their process equipment, which was costing them excessive downtime in production. The parts were difficult to repair and replacing them meant importing the parts from Italy, which came with major expense and extremely long lead-times.

After months of trying to find an alternative to repairing or importing from Italy, the solution turned out to be just four miles down the road. OcuGlass Director of Engineering, Jeff Stevens, also happens to be a member of the Board of Education for the Dollar Bay-Tamarack City Area Schools and familiar with their SOAR program (Student Organization of Aquatic Robotics). The program is a student-run, non-profit high school enterprise and a project-based class that allows students to design and create parts using 3-D printing technology. Stevens knew the program was more advanced than your average high school class and decided, with his Michigan Tech intern, to approach SOAR and start a collaboration. "Forming a collaboration between a local company, the DB-TC High School, and a Michigan Tech student has been a win-win-win," said Stevens.

Michigan Tech Undergraduate Mechanical Engineering Intern, Andrew Rose, under the direction of Stevens, has been the lead point of contact for the students and their advisor, Matt Zimmer. Rose said, "Working with the students has been a very rewarding experience for me. As an aspiring engineer, I have a passion for science and technology so to see such an impressive tech department in a local high school is awesome. The excitement the students express when we see a design come together to create a working part is remarkable."

The initial project included recreating a geometrically complex part for 3D printing and provide that part to OcuGlass for use in their process equipment. This first part is now in use on the production line and the SOAR students are working on developing several more parts. The goal is to have a long-term partnership with SOAR consistently providing parts to OcuGlass. Zimmer said, "The students develop proficiency in scheduling, material selection, and professional communication between clients and designers, along with advancing countless other skills to solve real problems."

OcuGlass has seen a tremendous benefit from the situation. The parts are being redesigned to better fit their applications, including increased durability and more accurate interface characteristics. Because SOAR is an enterprise business, the company pays for the parts, but saves a great deal on freight costs from Italy and saves over four weeks of lead time to get the parts. Stevens added, "We had a problem and we found a unique solution which has not only saved us time and money, but has actually improved our process equipment."

For more information about OcuGlass, please visit their website at www.ocuglass.net or call 906.483.3953. To contact DB-TC Area schools, visit them at <http://www.dollarbay.k12.mi.us> or call 906.482.5800.