

melt (causing toxic fumes) and metal parts would weld together.”

An additional benefit unique to waterjet technology is getting the best yield from material by nesting parts with Intelli-Max® Software.

“Because of the Omax waterjet machine and the ease-of-use with the software, it allows us to nest parts in these materials and get more pieces per sheet,” says Prukop. “It allows us to save customers thousands of dollars because they won’t have to purchase more materials and spend money on delivery fees.”

TruPart Manufacturing became a serious contender for domestic fabrication jobs as soon as they offered competitive lead times. Unlike before, Prukop operates his Omax machines with quick setup times and can route more rapid prototyping or long-run cutting jobs.

“Having a quick setup with equipment is important on what you need to make on a daily basis cash-wise,” he said. “We can complete a waterjet setup in 10 minutes, whereas a laser machine can take an hour and a CNC machine can take several hours.”

As a result, his machinists gain momentum with more waterjet operating time to blank out parts. The blanks are routed to secondary processes on other equipment, such as multiforms, benders, punch presses, and heat treating machinery.

“I get really scared when it’s silent out on the shop floor,” said Prukop. “I like pieces moving out of the facility quick. I like being able to control my own lead times. If a die goes down, you can at least blank out more pieces on your waterjet while you troubleshoot the die equipment.”

With well-managed time on their side, his operators can gauge their work priorities on available machines and run more parts on a daily basis. The kaizen concept leads to competitive prices for TruParts’ clients; profit to hire new employees; and funds to purchase new equipment.

Challenges Client Assumptions

When he speaks to potential clients favoring overseas fabrication processes, Prukop isn’t afraid to challenge their assumptions about producing quality end-products with outsourced labor and inspection.

“If you are looking for a cheaper production price, it costs in part quality,” he says. “We’ve seen some outsourced jobs that involved making 250,000 parts, and the pieces came back in poor quality. We’ve seen customers send out \$200,000 worth of work over-

An electrical connector used in medical devices cut in half by an OMAX abrasive waterjet. The client needed the item cut in half for quality inspection.

seas, and then lost \$200,000 along with several months of lead time. Those customers are eagerly looking at us to come up with affordable ways to make their parts with tighter quality control in a shorter amount of time.”

Curing Chopstick Rework

A client also asked TruPart Manufacturing to assist with inspecting electrical connectors made overseas. The connectors were used in precision medical devices, such as ultrasounds and other monitoring systems, so proper component assembly was critical.

Prukop used the Omax JetMachining Center to slice the connector in half so his clients could inspect the internal components. They discovered broken and smashed wires caused by the contractor during assembly to resolve loose fittings. The customer later learned the contractor remedied the loose component assembly by pushing a chopstick through the connector to complete the production—without informing the client about this new procedure.

This became a rude awakening for the client who realized he had over a thousand yards of faulty electrical cord and bad connectors. Prukop’s cutaway demonstration convinced his client about the advantages of in-house manufacturing instead of outsourcing the work.

“You can see from the video on our website, the part came out beautifully when cut on a waterjet,” he says. “They tried to machine the connectors with a saw, but it didn’t come out pretty since it galled up. This connector can’t be cut any other way but with a waterjet.”

This sort of teamwork is what TruPart Manufacturing strives to deliver for all their customers. Prukop believes his business has a good combination of expert machinists and reliable equipment to suit today’s fabrication demands.

“If our customers are not in business, we’re not in business,” he says. “We do our best to see that our work yields a good quality product that sells.” ■

