

All in the details

Job shops appreciate easy software, streamlined customer service and precise waterjet cuts



Dual-head-cutting OMAX waterjet machine in the Fusion Tech shop.

Companies creating parts for elaborate aerospace projects or artistic placards often prefer to use a precise waterjet cutter rather than plasma or laser cutting alternatives. From metals to plastics, OMAX Corp., Kent, Wash., provides the tools to cut parts for heavy-duty regenerators as well as chisel intricate designs into statues and monuments. Today's manufacturers rely on the latest software to meet customer demands in an expeditious manner.

For heavy-duty regenerators, gas turbines and pipelines for gas and electrical applications, Randy Thompson, president, Pal-Con Ltd., Stephenville, Texas, needed a waterjet cutter to cut fins. The company purchased three OMAX 80160 waterjet cutters. According to Thompson, fins are corrugated pieces of metal that

wouldn't manufacture well using a laser. Other software would be unable to process the download and the material would not be picked up, causing the machine to shut off. "Any other type of machine was more expensive to operate than the waterjet, and we couldn't use heat because we didn't want the warpage effect you get using heat.

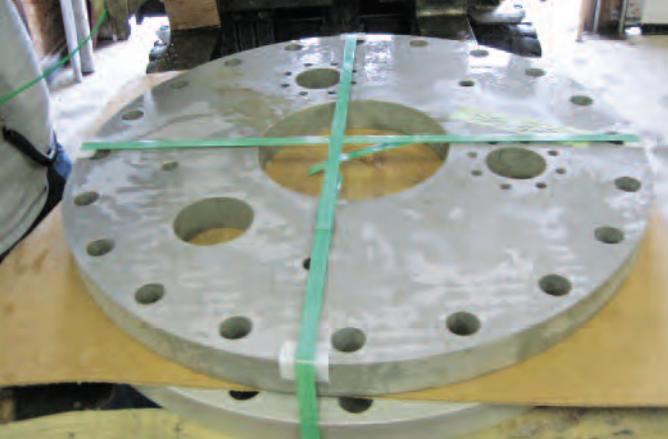
"We didn't realize how precise it would be and how much easier it makes fabricating," Thompson continues. "We do a lot of structural steel as well and you don't even have to use a square," he says. Originally, the company purchased the waterjet for cutting parts for its regenerator core, but after seeing its success, "we were able to use it elsewhere in our shop," says Thompson.

The OMAX 80160 JetMachining Center is a bridge-style model that uses a

completely sealed and protected ball screw drive system. It has a table size of 174 in. by 89 in. and rapid water level control for submerged cutting, according to the OMAX website. A work envelope offers an X-Y cutting travel of 168 in. by 80 in. Another highlight with any OMAX machine is customers can purchase accessories developed long after an initial purchase. "We keep that in mind when we design our accessories," says Sandra McLain, vice president of marketing at OMAX. "We have a saying, 'Obsolescence is obsolete.'"

Online resources

"One of the biggest drivers for us purchasing an OMAX system was the ease of use in jumping from the one- to two-piece orders to multiple-sheet production orders very easily and very quickly," says Dan



Left: A Fusion Tech-completed part for a pharmaceutical pill machine sorting station. **Below:** A finalized auger on the Fusion Tech shop floor.

Bentz, general manager at Fusion Tech Integrated Inc., Roseville, Ill., which has two 80160 waterjets. “The programming software is very easy to use, and all of the cutting parameters are spot on,” he says. The company wanted a machine capable of cutting a variety of material thicknesses ranging from thin-gauge material through 6 in. thick without having to reinvent the wheel. “If you want a certain edge quality, no matter what commodity you are cutting, with a simple click of a button, the pre-loaded parameters give you the results you want every time,” he says.

Pal-Con was aware of OMAX’s software when the company first purchased the waterjet machines. “Their software could do more than most of the other [providers Pal-Con looked at],” says Thompson. “They upgrade it, and as long as you’re hooked up to the Internet, you can get it updated.

“You can cut the materials manually,” Thompson continues. “But that takes a tremendous amount of time. We can cut a piece over 13 in. thick of stainless steel. I don’t know of anything that can cut that thick of material.” OMAX software allows Pal-Con to cut large thicknesses while cutting production time significantly.

“When we have a maintenance issue, our maintenance guys call OMAX and our contact there knows us and we know them,” Thompson adds. “As long as you keep up with the maintenance [of the machines], they’re pretty trustworthy. Getting on a routine maintenance schedule makes the waterjets that much more dependable.”

OMAX doesn’t guess what its customers need, the company asks. OMAX often conducts “meet the engineers” sessions at trade shows where customers are invited to a luncheon to provide feedback, according to McLain. “We ask customers for the top-five problems they’re having, and we take their input,” she says.

The company’s software guarantee enti-



ties customers to “free software for life to the original machine owner and as many sets of this software as needed,” McLain says. OMAX first manufactured abrasivejet cutting in 1993, and it is now in its third generation. The complete systems are manufactured at OMAX’s Kent, Wash., factory, where machines and software also are tested. “We are not an integrator but a total solution provider,” says McLain.

In addition to field support, OMAX offers free training at its headquarters for both the OMAX and MAXIEM lines. “The better trained the customer, the more satisfied the customer,” McLain says. “We also offer webinars and online tutorials, manuals and drawings to our customers through our password-protected support site.”

Attention to detail

According to Bentz, “On the architectural side of things, our lasers would not allow us the kind of detail that the waterjets [are capable of]. With the waterjet, because of its cold-cutting process and no HAZ, we can obtain the sharp edges and fine detail without the material melting or fusing back together as it does [with] the laser when trying to obtain this level of detail,” Bentz says. This is especially important as Fusion Tech expands and services its sister company, Stainless Reflections, which is targeting the custom monuments, plaques, statues and signs market.

Because of the struggling economy, Fusion Tech set aside a group of employees to focus on other markets, according to Bentz. “Since November, we’ve been doing a variety of projects, including war memorials, personal memorials and statues.” By using the waterjet process, Fusion Tech is able to achieve a level of detail that cannot be produced using a laser or plasma cutter. “People are really beginning to grasp the idea of customization and are using stainless steel in an industry that has previously only known brass and bronze to exist. It gives our clients a whole new level of making something truly unique,” he says.

As the economy improves, Pal-Con’s Thompson believes “business is on an upward swing. We’re busier than we’ve ever been.” Almost all the plate Pal-Con cuts, whether stainless or otherwise, is cut nearly exclusively using the OMAX waterjet cutter. “Using the waterjet is a lot better from using a torch cut or any other type of cut,” he says. “You can’t beat the accuracy.” **FFJ**

Fusion Tech, Roseville, Ill.,
309/774-4130, fax: 309/774-4161,
www.ftiinc.org.

OMAX Corp., Kent, Wash.,
253/872-2300, fax: 253/872-6190,
www.omax.com.

Pal-Con Ltd., Stephenville, Texas,
254/968-3335, fax: 254/968-3353,
www.palconltd.com.