

TRIDENT 4 Cutting Head Dramatically Reduces Operating Costs for Brandywine Machine Company

BACKGROUND



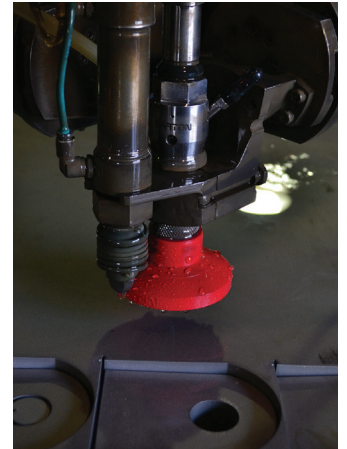
Brandywine Machine Company is a family-owned business that started in 1950 as a small carbon steel repair shop. It has since grown into a

complete stainless-steel service center with machining capabilities that include plasma cutting, waterjet cutting, saw cutting, drilling, and CNC machining. The company primarily manufactures custom stainless-steel plate products and maintains a large inventory of mill-direct, stainless-steel plate ranging from 3/16" to 4-1/2" thickness. It serves a variety of industries, supplying custom-made flanges and parts for petrochemical, oil, and gas customers; chemical processing operations, oil refinery and pipeline facilities, as well as water treatment plants. Brandywine is able to cut a wide range of thicknesses on their 130" x 289" waterjet table using two 87K intensifiers.

CHALLENGE

Equipped with Paser 4 cutting heads, Brandywine's waterjet was experiencing multiple leaks and short consumable part life at the cutting head, including orifices that were only lasting around 100 hours. The Paser 4 heads were leaking at frequent intervals, which caused downtime for repairs or replacement of the orifices.

Brandywine was losing about one hour of production time daily replacing parts to stop the leaking. On average, downtime for maintenance, repair, and replacement was costing the shop about a half-day of



cutting per week. Brandywine contacted their BARTON Regional Sales Manager, Alex, for assistance and recommendations on how to overcome the problem.



WATERJET PARTS



SOLUTION

Alex and the waterjet operator began by replacing the mixing chamber and orifice. The problem of leaking was still present, which led Alex to believe the problem might have to do with how well the orifice was being seated in the unit. Alex suggested that they install BARTON's new TRIDENT 4 cutting head, which features a diamond orifice cartridge that locks in place to eliminate the possibility of the orifice being improperly seated. Subsequent testing showed that the TRIDENT 4 solved the leaking problem. Next, Brandywine put the TRIDENT 4 into production, hoping it would increase the productivity of their waterjet cutting.



RESULTS

According to Jayme Krapf, Production Coordinator, Brandywine improved their operation in a variety of ways: *"The TRIDENT 4 has been running without a problem for 650 hours since it was installed."* *"It has eliminated frequent production downtime due to maintenance, and the simplicity of the design reduces the number of parts, and consequently variables, that may cause leaks or other issues. The cut quality is improved, and because we are no longer replacing consumables, we've saved the expense of the replacement parts. What's more, we are seeing 20% more life out of our mixing tubes. BARTON's new cutting head technology is really paying off,"* Krapf concluded.



"The TRIDENT 4 ... has eliminated frequent production downtime due to maintenance, and the simplicity of the design reduces the number of parts, and consequently variables, that may cause leaks or other issues."

**Jayme Krapf, Production Coordinator
Brandywine Machine Company**

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