

Applications for Plasma Cutting Technology

Industry: Manufacturing

Equipment: HyPerformance® Plasma HPR260®



Metal fabricator moves metal cutting from laser to HyPerformance Plasma at 30-40% savings

- Precision cut quality required for accurate fit-up and robotic welding.
- 99% of Wrayco's 8–12 mm material previously cut with laser is now cut with HPR260.
- Wrayco is cutting 44–50% faster on 8–12 mm parts compared to 4000 watt laser system.
- Operating costs are 30–40% less compared to 4000 watt laser system.



Platform cutout for an excavator cab. One of Wrayco's many jobs now fabricated using HyPerformance Plasma.

The company and products

Founded in 1980, Wrayco Industries is a manufacturer of precision-machined component parts and heavy-gauge, welded, steel fabrications used in the construction and mining equipment industry. The company has been a supplier of hydraulic tanks for Caterpillar, Inc. for over 20 years. Specializing in the fabrication of complex weldments, Wrayco produces a pressure tank that must be leak-free, with mounts that are held to very tight tolerances.

On an average day Wrayco will cut between 300 and 500 parts. The same part may be cut five different times in a week. All units (assemblies) that are ordered by their customers for next-day delivery are run that day, allowing Wrayco to respond to their customers' needs very quickly.

The problem

The problem surrounded Wrayco's two 4000 watt laser systems. They were back-logged with work, bogging down production. Almost all of Wrayco's 8–12 mm material had to be cut by the laser machine in order to insure the accuracy of the blanks used in forming the hydraulic tanks. Accurate fit-up of parts was essential for the robotic welding that followed: if they did not fit, they could not be used.

The solution

The answer to the problem was found through an authorized Hypertherm OEM. Having previously sold equipment to Wrayco, a strong relationship between the two businesses had developed. Since the OEM was in frequent contact with Wrayco and stayed abreast of their cutting needs, it was the OEM that Wrayco turned to for help with their throughput dilemma.

After defining Wrayco's specific equipment and tolerance requirement, the OEM recommended a new cutting table with Hypertherm's HyPerformance Plasma HPR260.

Benefits

Wrayco started realizing the benefits from the HPR260 immediately. Michael Gibb, VP of Manufacturing at Wrayco says, "Currently we are able to run 99% of all 8–12 mm parts off the HPR260. The HPR cuts 44% faster on 8 mm material and 50% faster on 10 mm and thicker material than our 4000 watt lasers, without any dross on the parts. The HPR meets our tolerance requirements on most of our difficult parts." Out of 200 parts that were in the 8–12 mm range previously cut with laser, only two pieces remain on the laser machine today.

"We feel very confident that our operating costs are 30–40% less per hour with the HyPerformance HPR260 compared to our laser."

"The cut quality of the HPR260 has provided us with a strategic backup to our laser systems. We have been able to off-load 12 hours per day of the work that used to be performed on the lasers and move it to the HPR260. Wrayco is currently looking to expand its customer base and we believe that we can take those 12 hours of cutting capacity and turn it into 6 million dollars worth of new work. This open capacity plus the strategic backup now in place would not have been possible without the addition of the HPR."

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