

Applications for Plasma Cutting Technology

Industry: Industrial Crane Manufacturer

Equipment: Powermax1000®



Industrial crane manufacturer sees significant savings by converting from oxy-acetylene to plasma

Hypertherm's Powermax1000 provided Mt. Clemens Crane with:

- Productivity gains of nearly three hours per job.
- Improved cut quality over oxyfuel.
- Greater ease of use and reduced training costs for new employees.
- Fast return on investment.

The company and products

Mt. Clemens Crane, Harrison Township, MI, has been manufacturing industrial cranes for over 35 years. Mt. Clemens recognizes that every overhead crane is different, and they work closely with each customer to design the right material handling solution for them. They are an ISO-certified single-source supplier with an in-house Michigan state licensed professional engineer and AWS-certified welders.

The problem

Mt. Clemens prides themselves on the quality of their product and the company is always looking for ways to improve productivity, manage costs, and improve quality. They had been using oxy-acetylene to cut the steel, mostly 5/8" thick, for their cranes. Each crane requires numerous lengthy cuts. Scott Swanson, shop manager, was concerned about the time spent on these cuts, the secondary operations required to prepare for welding, and the difficulty of hiring employees experienced enough with oxy-acetylene to make good cuts.

The solution

While on an errand to his local welding supply distributor, Swanson stopped to look at plasma cutting systems and was excited about what he

saw. "I was amazed at how inexpensive the systems were," says Swanson, "I thought they'd cost a lot more." He started investigating and liked what he found out about cut quality, cut speed and ease of use. "We have some Miller equipment and we looked at theirs too. Hypertherm is a company dedicated to plasma though, and we like that."

An evaluation of their cutting needs by their distributor's sales rep and their well-organized shop led to the recommendation

for a Powermax1000 with a 50-foot torch lead and a wheel kit. With a 35-foot power cord added by their electrician, the Powermax1000 can reach every station in the shop.

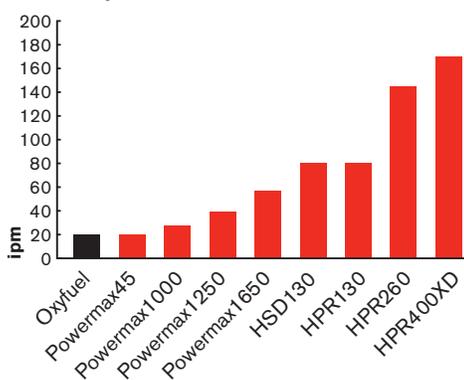
Benefits

Installation of the Powermax1000 provided several benefits for Mt. Clemens Crane. The productivity gains were immediately apparent. Swanson explains, "One crane might need 16 cuts, each seven or eight feet long. When you consider the adjusting you need to do to the oxy-acetylene and the secondary operations required, the plasma system saves maybe 10 minutes per cut. That's nearly three hours a crane. It pays for itself pretty quickly."

Ease of use was an unexpected benefit of converting to plasma. "I've taught some guys to use it who couldn't use a torch burner for anything. It's very handy that way. I can burn great with oxy-acetylene, but I've been doing it for 30 years. Plasma is easy. Once it's adjusted, it's set and that's it. New employees, guys who haven't cut before, they learn really quickly," notes Swanson. Not only has the company saved time training new employees, they've also noticed that experienced employees aren't being pulled away from production as often to provide training and answer questions.

Plasma results in a cleaner cut than oxy-acetylene and greatly reduces the need for grinding to prepare the edge for welding. For Mt. Clemens Crane, this directly affects the quality of their product. "We're a 'quality' company – that's what we're known for – the Powermax1000 helps us create a better quality product," says Swanson. "Now that we have it, our general manager wants us to use it all the time."

Cut speeds on 1/2-inch mild steel



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