

Hypertherm®

Indian precision sheet metal fabricator raises productivity with HyPro2000 torch

- Cutting table set-up at ESS ARR, with the Hypertherm MAX200 power system

Industry: Metal sheet fabrication

Equipment: HyPro2000™ retrofit torch for MAX200®

The company and products

Based in Faridabad, Haryana, India, ESS ARR manufactures precision sheet metal parts and fabrication components that are used in a wide range of industries such as earthmovers, automobiles, tube mills, and mineral and cement plants. The company's products are exported to the USA and Europe.

As a customer-centric company, ESS ARR prides itself in creating only the best quality goods, and has therefore since 2002 been an ardent believer of using plasma for its quality results in cutting. In 2006, the company adopted the MAX200, because it had excellent heavy duty cutting capabilities. Over the 7 years of operation with the MAX200, it was witnessed by ESS ARR that the demand of cutting has been rising steadily and they recognize that there is room for improvement in terms of amount of metals cut (meters of cutting) per consumable set.

Through maintaining a close relationship with ESS ARR, Hypertherm understood the issues that the end-user faced in using the MAX200 system. This led Hypertherm to introduce the HyPro2000 retrofit torch, which was proven to significantly improve a MAX200's performance.

The problem

In a competitive manufacturing environment, productivity and the ability to produce parts at a lower cost are very often key differentiators between companies and their business rivals. And where metal cutting technologies in India are concerned, plasma has proven to produce high quality cuts in the most cost-efficient manner on a myriad of metal types and thicknesses. For this reason, ESS ARR Metal Industries (ESS ARR) adopted plasma cutting for the company's precision sheet metal fabrication processes in the early 2000s. Though the plasma system met the

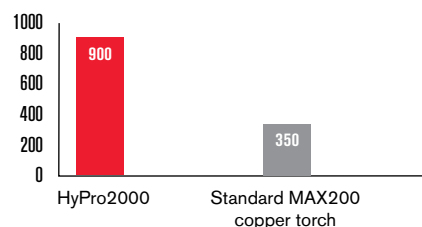
end-user's needs for the most part, ESS ARR continued to look out for means to raise its operational efficiency. Upon taking advice from Hypertherm to adopt the HyPro2000 retrofit torch, ESS ARR was able to attain optimal productivity, coupled with lower operating costs and better cut quality, on the shop floor.

The solution

In order to showcase the HyPro2000 torch's capabilities, Hypertherm arranged for a week-long trial to demonstrate how the retrofit torch would enhance ESS ARR's cutting processes and the quality of its sheet metal parts. Over the seven days, Hypertherm associates used the HyPro2000 retrofit torch on mild steel of varying thicknesses, comparing the new torch's productivity with that of the standard MAX200 torch.

During the trial period, ESS ARR witnessed a significant increase in the productivity of its existing MAX200 set-up. It was able to perform 900 m of cutting (on thickness ranging from 3 to 25 mm) with a single set of consumables, and cutting speeds increased from 1,700 mm/min to 2,500 mm/min. The end-user also witnessed significant improvement in cut quality on holes and slots. With such compelling evidence placed in front of its operators, ESS ARR decidedly adopted the HyPro2000 torch.

Length of metal cut (m)



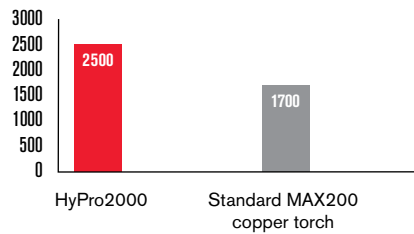


- On the right: a HyPro2000 torch cut sample



- HyPro2000 retrofit torch nozzle after 900 m of cutting

Cut speed (mm/min)



HyPro2000 retrofit torch significantly improved ESS ARR's productivity with improved cutting capabilities

Mr. Sudhir Singh Attri, Owner of ESS ARR, commented, "The results of the trial provided a strong case for us to replace the standard MAX200 torch with a HyPro2000 one. We were very excited about the positive benefits that we would reap from this new innovation."

In order to acquaint ESS ARR with the replacement torch, Hypertherm arranged for a full-day training. Operators became familiar with the torch in a single day, and quickly learnt how best to use it in a manner that would optimize metal cutting procedures.

The benefits

Within just one month of adopting the Hypertherm innovation, the manufacturer began to reap numerous benefits. First of all, ESS ARR was impressed with the HyPro2000 torch's consumable lifespan, which lasted 2,5 times longer than those in the standard MAX200 torch. The longer-lasting parts reduced the end-user's expenditure on consumables by 75%.

In addition, operators are now able to choose between 50 A, 130 A and 200 A consumables for different jobs, according to required metal plate thickness. Previously, consumable options were limited.

This reduced spending on consumables was a key contributor to the overall cost savings that ESS ARR achieved as a result of purchasing the new retrofit torch.

Another notable benefit that came with the HyPro2000 torch was enhanced cut quality. This improvement was visible not just to ESS ARR's employees – even its customers have noticed the difference, and many complimented ESS ARR's decision to upgrade its cutting equipment.

The combination of faster cutting speeds and enhanced cut quality has effectively raised the company's productivity. Jobs that required 10 hours to complete in the past, can now be accomplished in less than 9 hours, allowing ESS ARR to accept even more assignments to boost its revenue.

"We are now achieving on an average 900 m of cutting per set of consumables and we are very satisfied with the latest Hypertherm addition to our plasma set-up," remarked Mr. Attri. "Beyond attaining tangible cost and productivity benefits, we are very happy to have reinforced the strong relationship with Hypertherm that we have developed through the years."

With the positive experiences that ESS ARR has had with Hypertherm, as well as its associates and technologies, the end-user looks forward to adopting yet another Hypertherm innovation when the need arises, in order to keep its sheet metal cutting process at its optimum at all times.

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