

Steel service center cuts costs 24% and improves cutting efficiency



Cutting table with gantry and dual plasma torches

When you're in the business of cutting and processing steel, all aspects of your operation need to be in sync. This includes your plasma equipment performance, the durability and quality of your plasma consumables and the overall spend on these consumables. When these are not in sync, more frequent downtimes can occur, increased labor from reworking cut parts, overspending on consumables, more metal scrap, and higher repair parts spending. By focusing on improvements in three primary areas – cut quality, consumable life and consumable purchasing – Ohio-based Stark Metal Sales turned its steel cutting operation into a more efficient and more profitable operation. They did it with help from Arc Solutions, Inc. and Lincoln Electric.





Stark Metal Sales is a full-line steel service center located in Alliance, Ohio (near Youngstown). Founded in 1989, Stark Metals makes and sells a range of structural products – angles, channels, flats, pipe and tubing. Their product line also includes flat-rolled products, sheets and coils. Processing of these products includes a considerable amount of plate burning and cutting. The company's 77,000-square-foot facility cuts metals ranging in thickness from 3/16 to 2 inches, and services a customer base in a 150-mile radius that includes northeast and central Ohio and western Pennsylvania.

In early 2016, Stark Metals' plant manager Jim Taylor was experiencing issues with one of the company's two Spirit® 400 power sources. Taylor consulted with Jeff Kinn, automation manager for Arc Solutions, Inc., the integrator that originally developed the Lincoln Electric system for Stark. Kinn and his team responded promptly to get the Spirit 400 system running and back online.

During a follow-up call, the Arc Solutions team began noticing consistent problems with poor cut quality due to excessive dross buildup on the parts – which prompted frequent rework, especially in relation to the hole-cutting processes.

"We were taken aback by how much rework was coming off that machine," says Denny Vetter, president of Arc Solutions. "The bevel was far exceeding the three degrees of allowable tolerance. We knew that if we took care of the bevel issue, the rework time would be considerably reduced. We just said, 'Gentlemen, there are better ways of doing this if it's something you'd like to work toward.'"

Dave Rownd, president of Stark Metals, confirms the problems with cut quality prior to Arc Solutions' intervention. "I can't say every part needed rework," says Rownd, "but I would definitely say we were reworking more parts than what we should have been – certainly more than we would have liked."

Plasma Consumables: the Lincoln Electric option

The rework issue was more a function of the plasma consumables than the machine itself, says Vetter. The primary issue boiled down to Stark Metals' use of aftermarket torch heads and Centricut® aftermarket plasma consumables.

"We just knew there would be a difference between the aftermarkets and the OEM consumables," says Vetter. "So that's what started the conversation after we serviced the Spirit 400 machine."

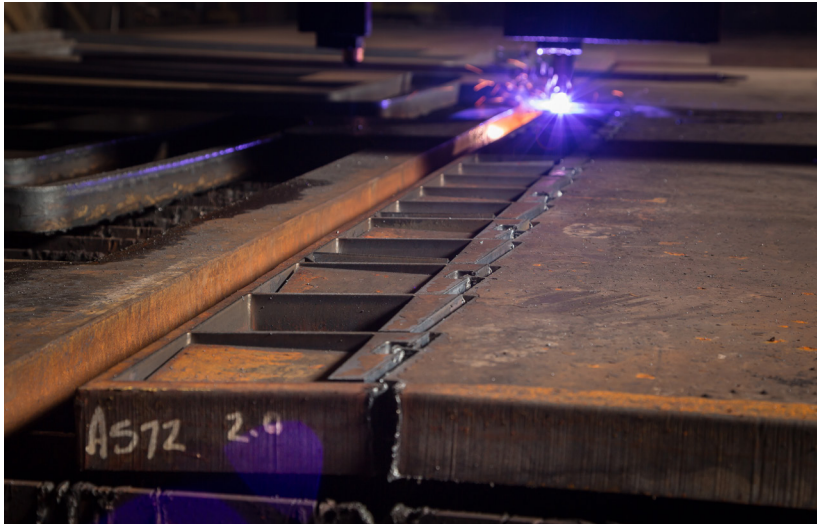
After a few weeks of discussion, Vetter's team recommended the replacement of Stark Metals' aftermarket consumables with Lincoln Electric products. "As one could understand, this was met with a fair amount of speculation from Dave and the rest of the Stark Metals team," says Vetter. "I explained to them that Arc Solutions and Lincoln would supply the components and the labor for free if we did not improve cut quality, bring the bevel back into specification and greatly reduce the time for rework. Dave agreed to schedule time for the changeover to one of the Spirit 400 plasma systems."

Within weeks, the improvements resulting from the changeover of the first machine in late April were enough to convince Stark Metals to transition their second Spirit 400 in June.

By late summer, Stark Metals was experiencing cost reductions and increased efficiencies on all fronts. Rownd estimates a 30% reduction in



Operator changing plasma cutting consumable



cleaning time for products with cuts exceeding 1-inch thickness. Reduction in cleaning time for cuts less than 1 inch was even greater, in the 40% to 50% range. "This is all due to less dross accumulating at the bottom of the parts," says Rownd.

In addition, Stark Metals has experienced a dramatic decrease in its use of grinding pads and sanding belts. "That has dropped almost 80% month to month," says Rownd. "And this is all with volume coming through the system remaining relatively constant."

He adds: "The best news, according to our cleaners who are responsible for weld repair and rework, is that it has all but disappeared. We have to repair and re-burn bad parts very rarely now."

The Genuine Plasma Consumables B2B solution

While a change from Centricut® aftermarket plasma consumables to Lincoln Electric products has proven to be a definitive step toward improved cut quality, higher productivity and lower costs at Stark Metals, the transition to a new way of purchasing those consumables has been an equally important step. Lincoln Electric's Genuine Plasma Consumable B2B program has provided easier and more cost-effective access to plasma consumables.

"In addition to the usual Lincoln Electric B2B program benefits, we also offered Stark Metals discounted rates on our services," says Vetter. "We wanted to make this a win for everyone involved – Stark Metals, Arc Solutions and Lincoln Electric."

Based on a recent analysis of spending before and after the switch to the Lincoln Electric program (through September 2016), Stark Metals has experienced a 24% decrease per month in consumable costs, says Rownd. It's an even greater savings than he and his team had originally anticipated.

"Our general manager recently told me that everything about the B2B program has been, in his words, 'perfect,'" says Rownd. "He said if he's not in the office or otherwise not available, it's easy for him to direct someone else over the phone and walk them through the online ordering process. The transition to the B2B program has been absolutely seamless."

The program has proven to be an important component in Arc Solutions' broader array of services aimed at long-term savings and satisfaction, says Vetter.

"Our goal is to be a one-stop – whether it's for sales, integration, service or whatever else – and have all the correct plasma answers for customers," he says. "It's important to us that we work together as a team and not just sell product. Lincoln Electric's B2B program helps us do that. We're trying to sell product that lowers our customers' overall end cost. We're less interested in what their cost is today, and more interested in what their cost is at the end of the month, the end of the quarter or the end of the year. That's where we want to be saving money, and those are the goals that we work toward as a company."

Rownd and his team at Stark Metals put an equally high premium on customer service – which is why the partnership between Stark Metals, Arc Solutions and Lincoln Electric has been successful. "Denny and I had a conversation early in this process," says Rownd, "and I told him that customer service is very important to us, and the money we spend to make quality cuts is what enables us to be successful in the marketplace. So when he came back to me and said, 'Hey listen, Lincoln Electric offers this B2B program that puts you in a very specific bracket of services we provide,' it makes it kind of a slam dunk for us as the end user. When we're presented with options and opportunities like that, it's easy for us to say, 'You know what? We're confident about investigating this program and working our way down this path.'"



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