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METAL FABRICATION NEWS

Manufacturing Processes Keep Voisard a Step Ahead

An aluminum drum compactor top, plasma cut on the 3700 ATC, is displayed by Tom Hamman, manufacturing engineer at Voisard.

Nesting software compatible with the Whitney and the lasers helps operator Spencer Scott maximize material usage (left). Kenney Stephens, press brake operator, checks tolerances after a part from the Whitney is folded.

Voisard Manufacturing, Inc., a full service, QS-9000 certified metal fabrication facility in Shiloh, Ohio, keeps their customers going whether the need is one part or a production lot of 250.

"If an older truck is broken down someplace, we will make one piece and ship it to the dealer," says James Rosser, President. "It's going to be there. It's going to work. We do the 'tough stuff' that people need immediately."

To meet this promise, Voisard continually upgrades it manufacturing processes, adding the newest technology, reworking the production flow, increasing electronic communication capabilities…staying at the front edge of customer quality and price requirements.

The company has moved to the cellular concept of manufacturing, creating a part flow from the Whitney punch/plasma or laser to a dedicated press brake and on to the weld station. By changing to the cellular manufacturing model, Voisard has cut inventory by one third. And, material handling has been greatly reduced.

Barry Ballinger, Chief Financial Officer, says, "The primary objective to automating our processes has been to become a more flexible, full service shop. We discuss a project with our customer, take it through the shop, paint it and ship it without going to any outside processes. It gets the product turned around quickly."

The implementation of the new manufacturing methods has eliminated room for error and rework. Production flow needs to be uninterrupted. For each finished product to meet its stringent specifications, parts at the "front end" have to be within tolerances. No question.

Sheet capacity up to 60" x 120" provides savings by eliminating the majority of outside shearing of operations.

Tom Hamman, Manufacturing Engineer, says, "If the part tolerances are floating, we have a challenge in the press brake area. We get some parts that are 1/4" or 3/8" and they might have 15 or 20 different size holes and three or four bends. If the edge quality is off or the angularity is off and we go to the brake, it's virtually impossible to hold tolerances. So we looked for a machine that could meet the challenge."

Voisard's experience with three 1976 Whitney 647 punch/plasma's caused them to look at the "new" TRUECut™ plasma process. The new cut quality, with little in common with the older plasma cut, sold Voisard on the 3700 ATC. Minimal edge angularity, elimination of secondary clean-up operations, ability to hold tolerances and speed were key justification advantages.

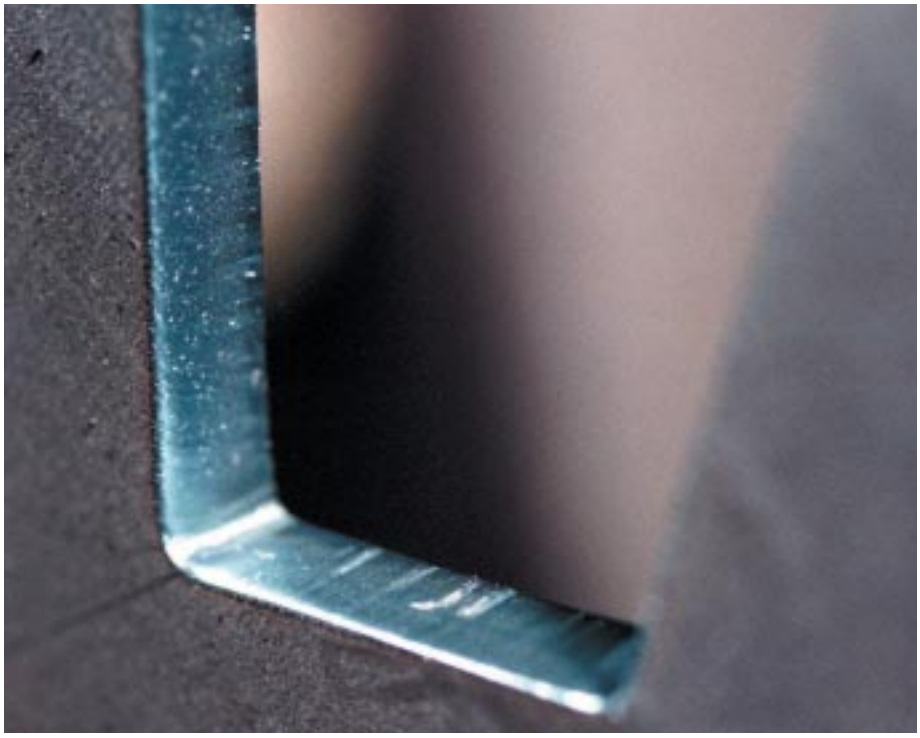
The first job across the Voisard 3700 ATC was 3/8" plate, hole intensive with a lot of tool changes. Before the 3700 ATC, the part was taken from the old Whitney single station 647 to a turret for additional punching then back to the 647 for plasma cutting.

By moving the part to the 3700 ATC for punching and cutting in one operation, production time on a lot of 250 was reduced from two and a half days to six hours. And, quality increased.

An estimated million and a half pounds of steel—including galvaneal, stainless, and high strain—is processed on the 3700 ATC each year. All material meeting strict quality standards.

"We found that by improving the quality material we get better throughput," Hamman says. "If all conditions are good and the material is good, we can almost get a laser cut quality from the Whitney…then we have fewer rejections down the line."

Voisard also looked at processes in front of the 3700 ATC and found savings tied into the machine's sheet capacity. Since a full sheet of medium to heavy plate is accommodated, costs of purchased blanks with outside shearing was nearly eliminated. In-house, three shears that ran "just about around the clock" have been reduced to one shear running about 12 hours a day.



Close-up of TRUECut edge in 1/2" material. The "new" plasma cuts are dross-free, allowing parts to move directly to secondary operations.

A kit of parts and its assembly. Final product is a hitch plate for a one ton truck for one of Voisard's many municipal customers.

Many customers work with Voisard engineers during the design process to build in production efficiencies.

"We do a lot of sketches and kick ideas around. Then we bring the plan into reality and fabricate their part," says Hamman. "We give customers suggestions on tolerance problems or maybe a different idea as far as forming."

Hydraulic punching combined with TRUECut provide production and quality advantages that benefit Voisard customers.

When Voisard works one on one with the customer, they build in efficiencies available because of their progressive shop operations. The result is a better price and faster turn-around for the customer.

Communication easily flows from the customer designs through production. Whether arriving in blueprint or electronic form, parts are included in a dynamic nesting program to speed production and save material.

"Since 1986 when we moved away from paper drives, we've brought in the CAD systems, automatic programming, and all the machines have RS232 ports," Hamman explains. "When a customer sends us DXF files we have translators to convert it to our language. The Whitney is very good at accepting this information and we can be cutting new parts within a couple of hours."

The future includes more growth, more expansion and further diversification of the customer base.

"We continue to work to keep a couple of steps ahead of everybody else," says Ballinger. "We want to be in a different league than other fabricators. We want to be prepared to accommodate any requests our customers might come up with and maintain our quality and delivery standards." ◆

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