

GILCHRIST METAL FABRICATING or simply GMF Hudson, NH

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GILCHRIST METAL FABRICATING

The Gilchrist Metal Fabricating story has to begin with the successful story about a family. Gilchrist is presently a 3rd generation company owned and operated by Jack Gilchrist. His son, Stuart, follows in his footsteps and the company is growing with a passion to get even better. This was a very evident feeling we saw in our interview visit and is not always the case in 2nd or 3rd generation companies.

FABRICATION CAPABILITY

in selling for Crocker, he knew the customer base, and in July of 1975 started Gilchrist Metal Fabricating Company, Inc. and moved to Hudson, NH.

GMF's primary business was, initially, related to the nuclear industry and paper pulp fabrications. Machining, shearing, sawing, plasma cutting, forming and welding were the primary operations.

Enter Jack Gilchrist, who started learning the business on the shop floor in January 1976, as a

(left) PRESS BRAKES 20' 660 ton 16'6" 600 ton 14' 750 ton 13' 357 ton 6 axis CNC 10' 180 ton 8' 250 ton

(below) ROLLING 120" long 3/4" mild steel 60" long 3/16" mild steel 50" long 5/8" mild steel 48" long 3/16" mild steel 24" long 1/16" mild steel Angle Rolling Pipe Rolling Bar Rolling Flattening Straightening

GMF was originally founded by John Gilchrist in July 1975. He worked for a couple firms in the Cambridge, MA area, most notably the Crocker Co., a small fabricating shop that grew into a very successful, large, fabrication shop in Burlington, MA. The Crocker family, in 1973, leased the business to another company but it failed.

John, at 55 years of youth, purchased some of the liquidated Crocker equipment. Because he was well versed



Shearing 16'7" long 1/2" mild steel.



Mitsubishi Laser w/ Pallet Shuttle, 6'x 12', 1" mild steel, 1/2" stainless, 1" acrylic, Laser marking.

helper on a 16' 600 ton mechanical press brake. About six months later the operator left and Jack became the company's sole brake operator.

During the 70s GMF got heavily involved in the concrete precast industry, cutting and forming parts associated with that industry. They still do a lot of that today.

FABRICATIONS

In 1980 the company expanded as the heavier side of the fabrication business grew. They added an LVD 20', 660 ton, 3 axis hydraulic press brake



A Quickmill 8' x 15' gantry milling machine. Note the set up fixture waiting for the next piece. GMF uses their in-house version of pallets, special fixtures to increase machine run times.



Rail sections which hold tooling segments are machined to .002" tolerances in fabricated weldments.

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and a $\frac{1}{2}$ " thick 16'7" shear, S-16 to support the demand of the nuclear industry. The increased capacities opened new doors of business for GMF. They started making long aluminum tubes for the UHF and VHF broadcasting industry and soon after purchased a 12' seam welder. In 1985 they added CNC punch press / plasma cutting machinery capable of punching 1/2" plate +/- .004" and plasma cutting +/-.020". This opened doors into the semiconductor manufacturing industry for precision frames of structural tubing.

John mentored Jack for 11 years as he moved through the forming department into production management, estimating, project management and general manager. In 1986, John started to phase out of the business having prepared Jack to assume his role. That summer, John was diagnosed





Rolled plastic is needed by one of GMF's customers.

They developed an answer for the problem by using a press brake.

Fabricated component housings are a common construction assembly at Gilchrist.

with cancer and died the following March. In 1993, Jack bought out the other family members' shares.

Jack was told fabricating and machining didn't go together. But Jack, the maverick, saw an opportunity to acquire their first CNC milling machine, a small Moriseki MV-55. It turned out to be a shrewd move enabling GMF to change their workers comp classification and cut their premiums in half. But more important it again opened doors of opportunity for expansion.



These large fabrications are going to be used for The Smith Center for The Performing Arts in Las Vegas. The contractor tried to get these made off-shore as well as in the USA. The inserts have grained pieces going in two directions, on a sand blasted background and finished with 100% mirror finish on the top two triangles. There was no way to blend the welds and the criteria was for no visible surface flaws from 12'.

Gilchrist Metal Fab offered the only solution to the problem and landed the enormous job.

They started developing and manufacturing press brakes and components for plasma cutting machinery, imaging, and microchip scanning equipment while continuing to serve industries such as military transportation, food processing, paper pulp processing, communication (UHF and VHF broadcasting and satellite



communications), semi conductor manufacturing equipment and components for panel saws.

MACHINING CAPABILITIES

Today they still do many of the same applications, but also do a lot of structural artwork projects, LED lighting, medical equipment parts for MRI machines, food processing equipment, military defense work, secondary operations for steel service centers, deep water drilling, plus more. To accomplish the new opportunities, they added on to the shop. They manufactured their own plasma cutting machine with an attached pallet shuttle capable of cutting 1.0" inch thick plate +/-.020" with a very square edge. They purchased a larger CNC vertical milling machine and installed a CNC horizontal boring mill creating yet another multitude of new opportunities.

What draws a lot of customers is their ability to shear up to 1/2" steel 16'6" long, or 3/8" stainless. They do brake forming up to 20' and roll forming tubes from syringe size to 3/4" thick.

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(above) Toshiba CNC Horiz, boring and milling w/ 5th axis rotary table, 98" x 98" x 70" is a key machine. Most of GMF's machines are equipped with pallets for fast, cost effective operation.

(left) *QuickMill Gantry Machining Center* 5' wide x 27' with rotary positioning.

(below) Base Mold for deep water-drilling application.





GMF has a Komat'su Fine Plasma Cutting System with a pallet shuttle that will handle mild steel to 1.5", stainless to 1.25", 1" aluminum and a cutting zone 100" x 260".

In March of 1997 they received their ISO 9002 registration, elevating their awareness of their internal and external customers' needs along with creating additional market opportunities. They purchased an additional 36,000 square feet building in the industrial park which is used for the fabrication of plastic components for the environmental industry and value added assembly operations of some products currently fabricated by GMF.

They added more equipment such as a 27' long gantry mill to machine slotted pole antenna masts, a $\frac{3}{4}$ " x 120" plate roller, a 6' x 12' laser cutting machine with pallet shuttle, robotic welding with 10' interchangeable pallets, an 8' x 15' gantry mill, and a Kitamura horizontal milling machine with twin 24" pallets. They also have an Okuma CNC Lathe with 23.62" between centers and lots of other vertical milling centers, gantry machine centers and more.



Double wall, water cooling, stainless steel door.

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Aluminum structure for a lighthouse overlooking Meredith Bay in Laconia, NH.



Double wall, stainless steel, vacuum chamber.

Stuart is the next generation in line and came on board GMF in 2007. Stuart attended Northeastern University while working several internships at various companies, including Mass Electric Construction (MECC), a division of Kiewit Construction, one of the largest construction companies in the US. After college he was hired on full time by MECC as an estimator and a project engineer. Several years later he decided to join his father at GMF to look for opportunities to strengthen the company. Stuart is currently responsible for the general management of GMF while being one of the top sales producers for the company.

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