Mill Masters Inc.: The hidden gem of the tubing industry

One of the most important things a customer is looking for, aside from a great quality product, is a manufacturer who will stick with them throughout the entire process; even after the installation is complete. For this reason, Mill Masters Inc. is always there to help their customers, whether that means answering a phone call, visiting a customer's facility, or providing equipment training to new operators.

Stainless Steel World Americas was happy to speak with Bill Panthofer, President, and Mike Fisch, Product Manager of Mill Masters Inc., about the company's history in the heat exchanger and subsea industries, their commitment to providing high-quality equipment to their customers, and their plans for 2021 and beyond.

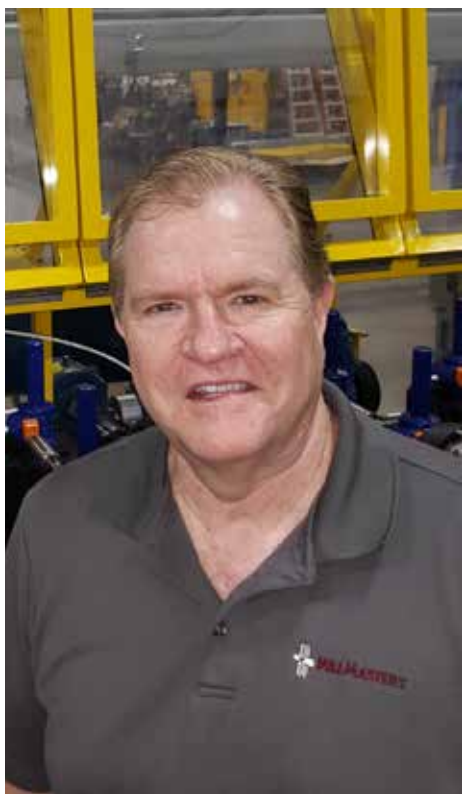
By Brittani Schroeder

A history

Mill Masters Inc. began their corporate journey in 1992, by offering customers consulting services as well as tooling design and regrinds services. Three years later, the company moved into a larger, 5,000 square foot (sq. ft.), facility that was better suited for designing and manufacturing various components. "Our first several years brought many developments for the company," says Bill Panthofer. "In 1997, we built our first HF (High Frequency) thin-wall welded seam tube mills. Only one year later we increased our capacity by creating a 40,000 sq. ft. facility that could fulfill an order for three HF welded seam tube mills."

In 1999, Mill Masters acquired the assets and intellectual property of McKenica, Inc, a pioneer and leader in HF welded seam tube mills. With this purchase, the company was able to further expand their product line to include the McKenica branded tube mills and auxiliary equipment. "By sharing the technologies of each respective brand, we were able to develop innovative processes that led to the production of the best thin wall tube mill machinery and tooling available in the industry. That is still true to this day," explains Panthofer.

Over the last decade and a half, Mill Masters has continued to manufacture welded seam tube mills as well as related tooling and components. Their primary markets have been the automotive and heavy-duty heat exchanger markets. The addition of 16,800 sq.ft. to their Jackson, Tennessee (TN), U.S.A. facility in 2014, bringing it to a total of 56,800 sq. ft., gave the company more space to manufacture new applications, such as thin-wall welded seam brass solder coated tubes for the commercial heat exchanger market.



Bill Panthofer.

In the last six years, Mill Masters has diversified their product range. Their series includes thin-wall tubing for a number of heat exchanger applications such as: combustion and electric vehicles, food and liquid preservation, power generation (i.e. standby for medical facilities), and air conditioning; welded tube mills for small diameters; and welded cable mills for the 5G subsea, communications (i.e. fiber optic), power transmission, oil, and nuclear industries.

A company mission

Mill Masters is dedicated to maintaining their reputation as the leader in all thin-wall welded seam tube markets around the globe. How is this achieved? By providing the best quality, value, support, service, and delivery.

"By choosing Mill Masters for your project, you receive quality, value, all in a one-stop shop," states Fisch. "All of Mill Masters associates are committed to total quality. A customer's product is dependent upon our mill maintaining a stringent 1.67 CPK specification. In terms of value, our innovative designs are guaranteed to maximize the customer's production, increase worker safety, reduce downtime, and assure an optimum return on their investment. With single source responsibility, customers have everything they need–design, engineering, manufacturing, assembly, and testing all at one location. Since the customer's integrated tube mill has been purchased from a single source, one phone call is all you need for any type of service, tooling, spare parts, or maintenance."

The company is always on the lookout for changes to the existing markets, while also watching as new markets emerge. In this way, Mill Masters ensures their existing products are updated to meet new needs, and new products are created to fill the gaps in the emerging markets. "When it comes to research and development (R&D), we look at the issues our customers are having, and general challenges that are being faced in the industry, and then conduct a team brainstorming session to discuss solutions to the current and emerging issues," says Panthofer. "We are the go-to company for R&D projects that most other companies do not want to do."

A global approach

Mill Masters has over 400 tube mill installations across the globe, in over 23 different companies. "Some of these tube mills are over 60 years old and still run daily production," says Mike Fisch. "We have an outstanding reputation for supplying quality, heavy duty, and 'built to last' tube mills."

The company provides their excellent service and technical support from their main facility in Jackson, TN. In addition to their U.S. operations, Mill Masters has sales agents in several countries, including China, Korea, and India, with an additional office located in Monterrey, Mexico. Approximately 60% of the business comes from exports.

"We do all of our distribution from Tennessee, since that is where the manufacturing facility is. We do, however, keep stock of critical spare parts in several countries, so if anything happens, the customers can be up and running again quickly. That being said, we do not have a lot of failures," says Panthofer. "We also work with the customers to ensure they have ample

supply of spare tooling and consumables at their facilities. When that stock runs low, they just contact us directly. There is no middle person to deal with, which makes things easier for the customer."

A partnership from start to finish, and beyond

Building a partnership based on quality and trust is of the utmost importance to Mill Masters. "We want to make sure our customers trust that we can get the job done correctly and on time, with the highest quality manufacturing," explains Fisch.

"We find that once we get started on a project, we follow through and stick it out until the very end. But honestly, there is no 'end'," Panthofer relays. "We engage with the customers after installation as well." Mill Masters works with several customers to do routine maintenance and updates, servicing, consulting, and more. "Following up with the customers after delivery is very important to us to confirm there are not any issues with the machine, and to see if additional training is required."

Mill Masters partners with their customers to help develop new products, or to improve their existing products. With a flexible approach, the company is willing to integrate customer-specific components into the Mill Masters system. "We will assemble all tube mill components, fully integrate and program the devices, test and perform acceptance trials, and include training for the operators, maintenance teams, and all other engineers. This happens all on-site at the Mill Masters facility before the system is shipped to the customer," Fisch relays. "Repeat trials, acceptance, and training also happens at the customer's site. We believe this ensures quick and trouble-free startup."

Panthofer elaborates, "We make sure our equipment is held to the highest manufacturing standards, to make sure we do not negatively impact those we are working with." The manufacturing and tooling calibration at Mill Masters are ISO compliant. Mill Masters has invested several million dollars on production equipment to improve the quality of their products, reduce lead times, and costs.

An extensive product offering

To service the heat exchanger industry, the company offers HF induction weld, laser, or TIG (gas tungsten arc welding, also known as tungsten inert gas welding) mills, which are constructed of materials such as: stainless steels, Inconel, steel, aluminum, and copper alloys. The tube mills work with all heat exchanger products including CAC (Charge Air Coolers), WCWC (Water Cooled Water Coolers), ICAC (Internal Charged Air Cooler), radiators, oil coolers, air condensers, and EGRs (exhaust gas recyclers). As Panthofer explains, "The EGRs significantly reduce pollution by recycling the exhaust back through the engine and burning it off, which releases less pollution into the air. This is why you will see fewer 18-wheelers going down the interstate pumping black smoke into the atmosphere."

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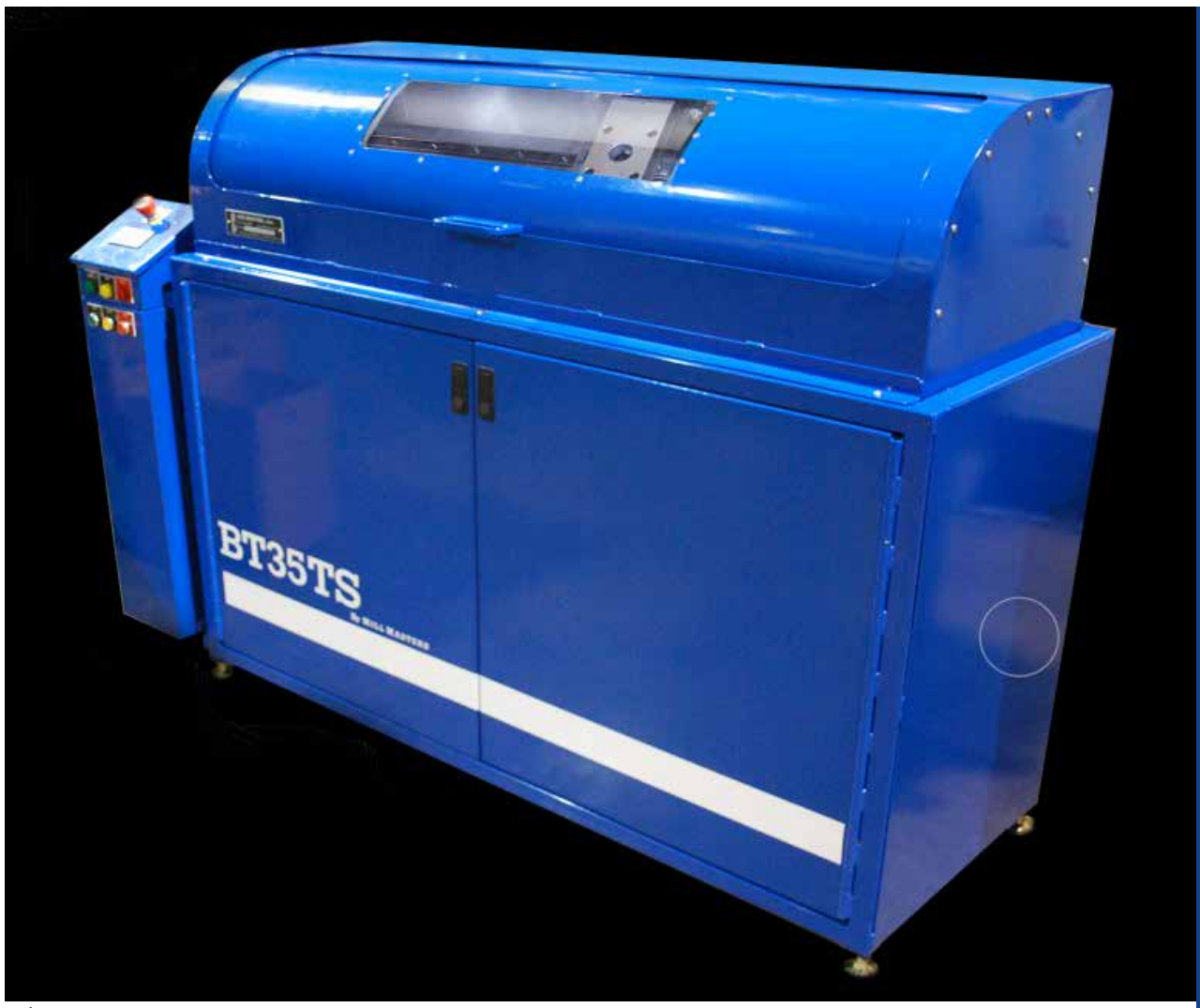
>
> Mike Fisch.

Beyond tube mills, Mill Masters also manufactures precision-made roll tooling for any brand of tube mill, quick change tooling subplates for fast and easy tooling size changeovers, high speed cutoffs for cut-to-length tubing, weld boxes for TIG or laser applications, weld boxes for HF induction weld applications, and other ancillary equipment such as burst testers, subplate storage racks and carts, and dimple/dimple free components used for heat exchanger tube profiles.

"We just started to manufacture tubing for the heat exchangers used in electric vehicles, which has been a quickly emerging market," states Panthofer. Mill Masters has also developed a process to arc spray an aluminum coating on to a steel tube after TIG welding, which prevents corrosion, and developed a process to reduce weld spume inside of the welded tubes.

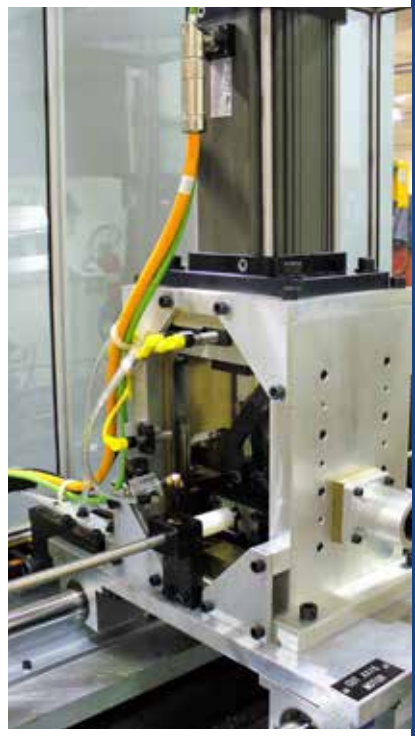
Additionally, the company works on a lot of projects for the cable market, and fiber optics. "Some of the cables we are making are stainless steel jacketed cables, that contain a variety of different types of wires," explains Fisch. "We have done a lot with the subsea cable industry. For example, we just did a large developmental project for a company that runs the cables under the ocean from Europe to the U.S. Those cables will take communications across the ocean – in a way joining the two countries."



Tube Burst Tester.


Quick Change Tooling Plates.


Weld Box (TIG/Laser).


Electronic Flying Cutoff.

A domestic advantage

In 2021, the desire for domestically sourced products has never been stronger, and Mill Masters plans to capitalize on that. "We are finding that American customers are wanting to deal with American companies. I think the biggest pull is that we are a phone call away, and customers want to know they have the support when they need it. In some cases, we can just drive out to their facility. American companies are investing in America, and that will be good for us," states Fisch.

A plan for the future

Mill Masters recently celebrated their 29th anniversary, and is looking forward to ringing in their 30th anniversary in 2022. "We have been going strong for almost 30 years now, and we are only going to grow stronger," relays Fisch.

Looking at 2021 and beyond, Mill Masters hopes to continue growing and providing high-quality equipment to companies located domestically and internationally. "We are a hidden gem in this industry, and we hope that more people will start to see that," concludes Panthofer.