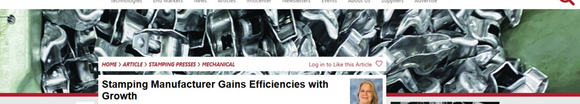

Stamping Manufacturer Gains Efficiencies with Growth

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When metal forming and fabricating manufacturer HTT Inc., Sheboygan, WI, enjoyed growth during the last five years, it seized the opportunity to expand its mechanical-press fleet, consolidate its facilities and build a reduced-vibration plant addition to house its largest mechanical presses.

Growth offers multiple opportunities to make improvements and to gain efficiencies. So when metal forming and fabricating manufacturer HTT Inc., Sheboygan, WI, enjoyed growth during the last few years, it seized the opportunity to expand its mechanical-press fleet, consolidate its facilities and build a reduced-vibration plant addition to house its largest mechanical presses.

Expand, Upgrade Press Fleet

HTT operates 35 presses ranging from a small 30-ton to a new 500-ton model. "We had 400-ton presses in our repertoire already, and a lot of the work that we do for our existing customers, be it ATV, housewares, motor sports and automotive, small engines, or HVAC, are in that 400-ton range," says John Karrels, director of operations, and recent company partner. "We added a large-bed, 500-ton press to help us expand into new markets such as infrastructure, energy and water filtration.

One of the four large-tonnage presses that HTT installed in its new, 32,000-sq.-ft. addition takes its place above its specially designed press foundation/pit, engineered and constructed with vibration-dampening materials to isolate vibration and prevent it from transmitting to the ground and surrounding areas.

"We also wanted to convert some of our current hand-fed operations to tandem presses with robotic transfers," Karrels continues. "For one of our customers, we make metal housings for the lawn-and-garden market. Those lines house multiple dies—anywhere from three to nine. We were looking to house a larger press line to facilitate leveraging multiple presses in tandem, and then robotically transferring the parts from station to station. That allows us to take on some bigger parts and bigger dies for infrastructure projects that we don't necessarily take on today with an 8-ft. press bed."

HTT purchased a 500-ton mechanical press with a 144-in.-bed and installed it and three large-tonnage presses in its new addition early in 2024.

The manufacturer further enhanced its fleet by installing new, updated press controls. "We're making a strong, concerted effort to update our controls and increase our die sensoring as well," Karrels remarks. "We've updated seven presses this year by installing the latest Wintriss SmartPac Pro control, and are setting up to facilitate more die sensoring, which ultimately gives us faster run times."

Company management anticipates a 15% gain in output as a result of these projects, derived from increased run rates, quicker setups, reduced downtime and overall familiarity with the system.

"To have that common language, we made a big standardization push on our documentation, to try to have everything look the same so that we have one standard in communicating with the workforce," Karrels says. "Importantly, the controls are multilingual, helpful since we have several Spanish-speaking operators. So, along with having the QC documentation in English, we have it in Spanish as well."

Consolidate, Enlarge Plant

Since purchasing an existing company in Sheboygan in 2014, HTT had been straddling its operations between the two plants about 6 miles apart—161,000 sq. ft. in total. That meant frequent transporting of parts, equipment and personnel. "I was driving between the two plants nearly every day," Karrels relays.

HTT's original location in Sheboygan Falls was landlocked, restricting facility- and business-expansion opportunities. The company decided to consolidate that facility's operations with the Sheboygan plant and another building in proximity that it used for storage. The Sheboygan plant became the headquarters.

As part of its expansion, HTT closed a couple of roads to enable the site expansion in two directions. "That gave us the green light to work on consolidating and growth, realigning and moving. Consolidating our facilities really lends a lot of efficiency gains and the common synergy of having everybody under one roof," Karrels says.

Construction for HTT's addition began in May 2024 and finished at the end of the year. The presses and their pits are positioned diagonally to improve access for lift trucks and maintenance.

"The number of times that we need to interface with a product now is greatly reduced," adds Bob Lischka, director of supply chain, and also a recent company partner. "With warehousing and operations spread across two locations, we were touching product three, four, even five times, depending on how many different transactions were needed. Now, a product comes off of a paint line to inventory directly to the shipping truck. That in itself saves dramatically on handling time and costs.

"Some of our value proposition is to remove steps in the supply chain and to be an end-to-end source for our customers," Lischka continues. "So we take out those extra touches. Customers are not having to cut multiple purchase orders and manage more than one supplier. That's a competitive advantage that we are trying to harness going forward."

Karrels adds, "It allows us to leverage everything from work centers to the people side of things. We can share knowledge by bringing everything inhouse under one roof; to have more collaboration, to have more leveraging of resources overall."

The company broke ground on a new, 32,000-sq.-ft. building at the Sheboygan site in May, and finished the building at the end of 2024.

Reduce Vibration

When it comes to running mechanical presses, no vibration is good vibration. It negatively affects tooling, loosens press components, and —when your plant is located in a residential and multiple-business area, vibration renders your press fleet unwelcomed by neighbors.

HTT stamps parts for the lawn-and-garden, small motors, housewares, motor-sports and HVAC market segments. It has added large, high-tonnage presses to its fleet to expand capabilities to form larger stampings for the infrastructure and water-filtration markets.

In constructing the addition to house its four largest mechanical presses, HTT leadership made an unusual and substantial investment in stilling the vibration generated by the presses by ensconcing their foundations in vibration-holding pits.

HTT Inc. director of operations John Karrels believes that consolidating the company's facilities enhances its ability for collaboration, knowledge-sharing, and leveraging of resources.

"When we built this addition to house four presses and feed lines and our work-in-process, we wanted to improve some things," Lischka says. "One thing we did differently in the new building is to completely isolate vibration in our press installations. We didn't want to create any problems with surrounding businesses and residences. So we've invested pretty heavily into the pits and vibration-reduction systems to minimize any kind of issues with the neighbors."

A 330-ton, a 500-ton and two 400-ton presses are installed over four specially designed and constructed pits. Unisorb designed and performed the pit isolation. Layers of vibration-absorbent pads and isolation pads buffer vibration between the factory floor and the concrete foundations. The system isolates the presses from conducting vibration or movement into the ground surface. "That gives us almost a 100% reduction. The presses won't conduct or transmit anything farther than the perimeter," Lischka says.

"It was important to isolate the vibration because we have a lot of close, surrounding businesses and on the north side, the neighborhood is residential," Lischka adds. "We want to be considerate of the neighbors. We realized that when we came into this area and closed some streets, there were some learning curves with neighbors. We didn't want to cause issues and we want to be good neighbors."

Along with adding a new press, HTT Inc. is upgrading its presses with new controls.

The presses and their pits are positioned diagonally to improve accessibility for lift trucks and maintenance. And, as more presses are added in line, eventually an overhead gantry will service all of the presses.

In addition, the pits enable HTT to position the passline heights at operator level to make it user-friendly. "We want to try to make things as safety-oriented for our 130 employees as possible," Karrels says.

All actions were intended to improve customer relationships, employee work environments and efficiency, Karrels concludes. "We're taking a collaborative look across different dimensions: everyone from our procurement team to supply chain to manufacturing and engineering to see where we not only can be more efficient internally, but where we can share that value with our customers. We're looking at ways that we can really partner with customers to make our processes better." **MF**

Industry-Related Terms: Die, Forming, Lines, Model, Run, Surface, Forming
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See also: *SEYI AMERICA, INC.*

Technologies: ***PRESSROOM AUTOMATION, STAMPING PRESSES***

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