

Innovation in



At Aida-America Corp., metal stamping processes are evolving along with customer demands

There's a fine line between tradition and antiquation. Sometimes in the metals industry, things are done a certain way for no other reason than that's the way it's always been done.

This phenomenon is nothing new. For example, horses were the engine of choice for carriages and chariots for several millennia before Karl Benz produced the first gasoline-powered "buggy" in 1885, forever redefining personal transportation.

With standard press technology, little has changed in the last 30 years. The press goes up, the press goes down and material is formed into its desired shape. The details surrounding the process may be different from facility to facility, but the logic behind it has remained largely unchanged.

Aida-America Corp., Dayton, Ohio, a global producer of metal stamping

Aida's direct-drive servo presses use high-torque, low-rpm servomotors to enhance reliability and increase accuracy.

control

presses, continually seeks to rethink metalforming from the ground up as customers' evolving manufacturing demands necessitate higher precision and extreme efficiencies. Perhaps the most notable example of this is Aida's ServoPro technology. Its direct-drive servo presses use large, high-torque, low-rpm servomotors to enhance reliability and increase accuracy, much to the relief of those JIT-focused customers with little room for downtime.

"We're an applications-driven company, and we look at the production requirements that our customer base is struggling with and see what they're looking for in equipment specifications, features and process improvements and where their weak points are, including what they would like to be bringing into a process, which may be secondary to normal operations," says Bob Southwell, vice president of sales for Aida. "And that's led to a lot of developments, the most recent being the innovations we've done in servo technology."

Changing the program

Historically, it's been difficult to form exotic materials and add secondary processes such as in-die tapping and in-die welding, but Aida's ServoPro allows not just for that but for full programmability of the stroke.

"[Our research] was driven by customers looking to have programmability in the press stroke, both in stroke length and profile, as well as speed," says Southwell. "And some of the driving factors behind that is the fact that they need to form more exotic materials: HSLA steel, titanium, specialized aluminum and so forth. It was becoming difficult on a standard mechanical press with a fixed velocity curve. So that's where the servo technology really came into play."

Aida's aspirations for ingenuity are also

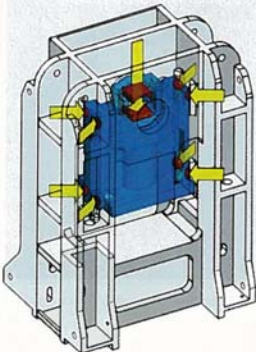
apparent outside of its servo presses, particularly in its ULX straight-side precision press.

Popular with drive train and seat components and in other automotive applications using HSLA steel, the ULX features a nine-point support system and a single-point center suspension with no con rod, and it's the first stamping press design where the press drive is more accurate than the die. The ULX is also available in capacities from 80 tons to 2,500 tons.

Southwell points to increasing pressure on stampers to control costs as a reason more companies are seeking technology like ULX, which allows for "finished parts to come out of the end that require no secondary machining operations. You're actually able to get the tolerance of the finish that's required on the final print rather than rely on a secondary machining process."

Continuing service

With any company that strives to make innovation the norm, the technological breakthroughs it produces mean nothing if they fall on deaf ears. By having a sound



Aida's ULX straight-side precision press is the first stamping press design where the press drive is more accurate than the die.

service and support system in place for its existing products and technology, a company ensures its customers will be eager to hear about what it's developing next.

"The sales department sells the first piece of equipment," says Southwell. "The service department sells the second. You can have the best piece of equipment in the world, but if you're not able to support it and customers can't depend on that piece of equipment, they're going to look elsewhere. That's true in any industry."

Qualtek Mfg. Inc., Colorado Springs, Colo., a heat treating, metal finishing, wire EDM and custom metal stamping specialist, purchased a 150-ton servo press from Aida after being convinced by the speed control at maximum torque through the complete stroke. Along with its purchase, Qualtek received comprehensive training in programming applications for the servo technology.

"We've found the service and training during the installation [of the press] to be very good," says Tony Fagnant, president of Qualtek. "The training for use of the new servo press is important, and Aida has excellent staff on queue to do just that. Past that, the press has been flawless, so service hasn't been needed."

In 2006, Master Mfg. Co. Inc., Evansville, Ind., a supplier of small metal stampings and clips, began looking for a larger

The ULX design features a nine-point support system.

Mechanical Presses

press for its operations and settled on a 165-ton servo press from Aida.

"We were interested in doubling our capacity while not limiting the type of job that can be put into the press," says John Cannon, president of Master Mfg. "We had at least five goals we wanted to accomplish

and floor space for only one press at the time. My list of needs consisted of at least 100 spm, current job press compatibility, indie tapping efficiencies, increased tonnage and bed size, and the ability to do drawing applications. As we researched these capabilities, we realized it was impossible to have

all these variables in one press until we stumbled upon servo technology."

Aida won over Master Mfg. with its ability to run faster with a shorter stroke. With its Aida press, the company can run 130 spm with a 2-in. stroke and can change to an 8-in. stroke or link motion and run 60 spm.

True to Southwell's word, Aida's service led to subsequent press purchases. In April, Master Mfg. purchased a 110-ton gap frame press from Aida.

"Aida's response and service has been second to none," says Cannon. "We had all of our questions answered immediately or [in a timely fashion], and the one service issue we encountered, a technician was at our location within 48 hours to fix the problem. This was a huge factor in Aida winning our business for our most recent 110-ton press purchase."

Being there. It's easy to say but much harder to make a reality. Aida, however, focuses its entire service philosophy around availability. Its Dayton facility has \$3 million in spare parts stocked, and 25 after-market support technicians are strategically placed across North America for customer convenience. This includes a Toronto office and, in February, the opening of Aida-Mexico, Monterrey, Mexico, to address the growing needs of customers south of the Rio Grande.

According to Southwell, such initiatives are indicative of how Aida views its customers: not as dollar signs, but as partners. And unlike the horse and carriage, that's a business model that never obsolesces.

"We're not interested in getting a request for a quote and then selling a press and getting their money and going forward," says Southwell. "We look at it more as a long-term partnership with our customers. It's an investment in resources, but over time it pays off for both us and our customers." **FFJ**

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