

Vertical expansion crossing the pond

Previously stand-offish, American service centers are warming to the idea of automated storage and retrieval.

By MICHELLE MARTINEZ ARJONA, Editor-in-Chief

“Unfortunately, in the U.S., when people think of expansion they pour another 100,000 sq. ft. of concrete and put a building up around it,” commented Darrell Steiner, district manager at Earle M. Jorgensen’s (EMJ) Kansas City location. A couple of years ago, when EMJ needed to expand, it made a radical move for any American company—it went vertical. Investing over \$3 million in a seven-story tall, Kasto-engineered automated storage and retrieval system, the company added 20 percent more storage capacity for bar stock, tube, pipe, flats, angles and channels, while using 41 percent less floor space.

“It was a substantial investment,” Steiner said. “But if you look at adding another 100,000 or 200,000 sq. ft and putting a new building around it—that’s also a substantial investment. We know installing the Kasto System was less than putting

up a greenfield plant.”

Kasto started producing the systems in 1992, and boasts some 700 installations worldwide—120 of which are in service centers. The overwhelming majority of the systems reside in Europe. Only a handful have crossed the Atlantic to the U.S.

The stall in U.S. sales was, in part, intentional, said Werner Rankenhohn, executive vice president of Kasto Racine, Inc., the North American subsidiary of Achern, Germany-based Kasto Maschinenbau GmbH & Co. “We deliberately did not come to the United States while our product was still in its infancy,” he explained. “We didn’t want to have mistakes 5000 miles from home. You better make sure that you have a system that works before you have something to say about it.” But Rankenhohn admitted, cultural differences between the U.S. and Europe have

had a hand as well.

For one thing, he pointed out, because of its relative abundance of land, the U.S. has not been forced to consider alternative methods of expansion, which may have cast the automated system as a ‘luxury’ item. In Europe, real estate is expensive or unavailable, making investment in cubic rather than square feet a necessity.

And, as with any new technology that comes ashore, a wait-and-see period set in. Service centers were curious about the system, but weren’t prepared to test drive it in their own facility. Four years ago, Ontario-based Russel Metals and Tennessee-based Siskin Steel & Supply Co. (now a subsidiary of Reliance Steel & Aluminum) were about the only companies in North America to have the system in house. “We took a chance by having the first two systems in the U.S.A.,” said John Pregulman,

MATERIAL HANDLING

president and COO of Siskin Steel & Supply. "But," he added, "it worked out great."

Siskin isn't the only company vouching for Kasto. The much-lauded installation at EMJ's Kansas City facility (for details on EMJ's system, see *Modern Metals* April 1999 issue) has turned some heads. O'Neal Steel is in the midst of planning an installation at its Birmingham, Alabama facility (due for completion in the fourth quarter of 2001), Siskin is talking about installing its third system at its Nashville, Tennessee location, and another company may add a Kasto system to its Chicago operation.

Material to man

What is capturing the attention of more service centers is what Craft O'Neal, senior vice president at O'Neal Steel, described as the "material-to-man" principle. "Unlike our current system," O'Neal explained, "a worker never has to retrieve material with a crane, forklift or side loader and move it anywhere. It's all automated."

"A cassette with the requested material is brought to the operator instead. The Windows NT computer keeps track of the inventory—its location, quantities, heat numbers, frequency of accesses—just to name a few of the software's attributes."

The software operates under a random or "chaotic" storage management system. What that means is that once the incoming stock is assigned a number, either by entering it into the computer or scanning the bar code from the work ticket, the system assigns the material a location in accordance with preset default parameters—for example, faster selling items may be placed closest to the order picking stations. Once the required material is removed from the cassette, the cassette does not return to the same slot. Rather, the system places the cassette in the closest empty space, speeding up

the order filling process. In fact, Rankenhohn said, the operator does not know where a given cassette is located in the system at any one time.

Indeed, it may be better that he doesn't. Kasto's automated systems range in size, but as O'Neal pointed out, some of the largest are capable of storing 43 million lbs. of steel bar stock. Faced with 70-ft. high banks of storage cassettes, each cassette possibly holding as much as 11,000 lbs., finding material manually would be virtually impossible. As John Pregulman said, "the Kasto system is run by computers. It [takes] human error completely out of the equation."

That doesn't mean that material is lost in a virtual wave of code. According to Rankenhohn, automation helps maintain an accurate inventory. "People know what is where and in what quantities reliably," he said. "We have seen service centers—large service centers—write off maybe half a million dollars worth of inventory per year—just because they can't find it. It's not that it has been stolen, but it has been misplaced or incorrectly labeled, so it can not be found anymore. "In those regards, the system helps. It is perpetually updating. It's a live update and you know exactly where something is whenever you need to know."

"We used to scan orders at every step of the process," continued Bob Bates, plant operations manager at EMJ's Kansas City location. "Kasto performs those scans automatically as the order goes through the process. At any time the salesperson can look on the computer and see where the order is at—if it's picked or not picked, on the truck—what's happening to it."

Bates commented that EMJ can enter orders into the Kasto system years in advance. Sales people are

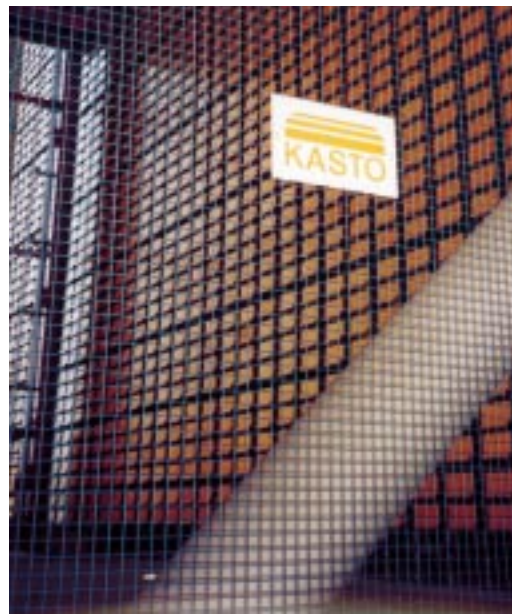


able to respond to customers and change the order at any time before it's picked.

Productivity pump

After installing the Kasto system, some of the service centers *Modern Metals* spoke with reported "double-digit" boosts in productivity. "This system is productive and efficient," declared Steiner. "We're able to be a low-cost supplier to our customers. Obviously with today's emphasis on cost reductions that's very important."

Based on high-capacity drives and depending on the crane used, Kasto reports average order picking cycle times of 1-1/2 min. or less. The operating crane can move at speeds of 350 fpm longitudinally and 200 fpm when pulling or pushing the cassettes. The gantry crane can be equipped with two simultaneously working cassette-pulling devices for high-volume order filling.





Rankenhohn cited a system in Germany that required just one person to pull approximately 180 to 190 orders in an eight-hour shift. "That is something that you simply don't get with an un-automated system," he said, "or with a system where the operator has to go and get the material. Depending on where you're coming from, you are almost tripling or quadrupling the activity."

Siskin operates its system 24 hours a day, six days a week. "It never stops," said Pregulman. "It doesn't get tired, it doesn't get hot in the summer or cold in the winter." And, he pointed out, because the system is not as labor intensive, work safety is improved, and an increase in production doesn't necessitate additional hires.

"You have to look at the long term," observed Pregulman. "In the long term, your biggest expense is people. If you can put in a system that's going to keep you from having to add people for a long period of time, than you're going to come out ahead. Our system paid for itself in three years." EMJ credits the system for creating a safer environment, indicating that work injuries were cut by two-thirds at the Kansas City location.

Automation poster children

Part of the reason why these

service centers were able to reap such rewards is because in many ways, they were ideal candidates for automation. Investing millions to increase efficiency and production only makes sense if you have enough orders to keep the system busy. But, Rankenhohn warned, "even if you do have enough picks, but you have a facility that is well laid out and you have no plans of expanding or moving—just for the sake of having something better and faster, it doesn't pay. Where the investment into the system really becomes a valuable choice is if you are planning to build a new facility."

EMJ's installation in Kansas City was the result of combining facilities after the sale of a warehouse. Siskin's Chattanooga system was part of a multi-million dollar expansion in 1995-96. "We had a limited amount of space to expand," Pregulman explained, "and the Kasto didn't take up much space. It used the cubic space rather than the square footage that would normally be used."

Conspicuously absent from Kasto's profile is mention of service center size. While a great number of the service centers using the automated systems in Europe are not even a quarter of the size of an EMJ or O'Neal, many have opted to make the investment. Rankenhohn granted that their cost/return analysis involves different considerations than found in the U.S., but maintained that "you don't have to be big to see automation. What you do have to have is enough activities to justify it."

John Pregulman agrees. "We've

always tried to stay on the cutting edge technologically. Because we weren't as big as our competition, we've had to be more advanced.

"The [cost of the] Kasto cannot be justified as fast as a side loader or racks" he said, "but we don't look at the physical part of it, we look at the people part of it and where we are looking to grow our business. For example, what's the cost to build big warehouses versus installing a Kasto system?"

The "big guys," Rankenhohn indicated, are still "much more represented in our project list than the smaller guys. The smaller guys feel that it's nice technology and it looks great, but that they can't afford it. If they feel they can't afford it, the next step will never be taken to find out if they can or not."

Word of mouth and a changing industry, however, may be slowly turning the tables. "I think people are starting to realize that to only



do what you've always done, you'll only get what you have always gotten," remarked Steiner. "They must look at it differently. Times are changing. If we don't change with it, we're going to be in the same turnstile that we've always been in." ■