By **Dan Markham**, Senior Editor

Alliance Goes Vertical to Improve Work Flow

This Canadian service center saw a three-fold increase in its throughput after installing a new cantilevered racking system.

When Alliance Steel added two Red Bud multi-cut blanking lines to its Laval, Quebec, carbon steel operation in the mid-1990s, the new processing equipment allowed the company to add to its product offerings. Adding aluminum and stainless sheet to its inventory also added material-handling problems.

"Once we started in aluminum, we were outstripping our capacity to perform and deliver. We started to investigate how to run a proper aluminum and stainless operation," recalls Michael Deitcher, president of Alliance Steel.

The company made plans to expand its building and install new material-handling equipment, but had to put those plans on hold in 2008 when the economy stalled. Even through the recession, though, Alliance's two new business segments continued to grow. By 2010, the company had no choice but to restart the project. "We sort of outgrew our shoes. We knew if we were going to be a serious player in the market, we had to be set up properly," Deitcher says.

Dusting off its original blueprints, with some minor changes, Alliance added 40,000 square feet to its 110,000-square-foot warehouse. Just as important, the expansion included a new cantilevered racking system from Mississauga, Ontario-based Canrack, served by two sideloaders and a bundle splitter. At the same time, Alliance upgraded its computer system.

Canrack helped Alliance fully understand how to change from its existing floor-stack system to the vertical method employed in racking. "It wasn't just the physical equipment we bought

(Photo courtesy Alliance Steel)

Alliance officials initially were hesitant to employ a sideloader to raise and lower heavy loads, but the company's warehouse staff has found the equipment easy to learn and use.

from them, but learning how to set things up. We spent a lot of time with them and learned an incredible amount," Deitcher says.

Initially, Alliance executives had serious worker safety concerns. "At first I was terrified of operating with a sideloader. The idea of picking up a bundle of steel or aluminum of 4,000 or 5,000 pounds and lifting it to a level 20 feet off the ground made me quake with fear," Deitcher says. "We started with training sessions for the employees that would be operating the

At-a-Glance

Alliance Steel Corp.

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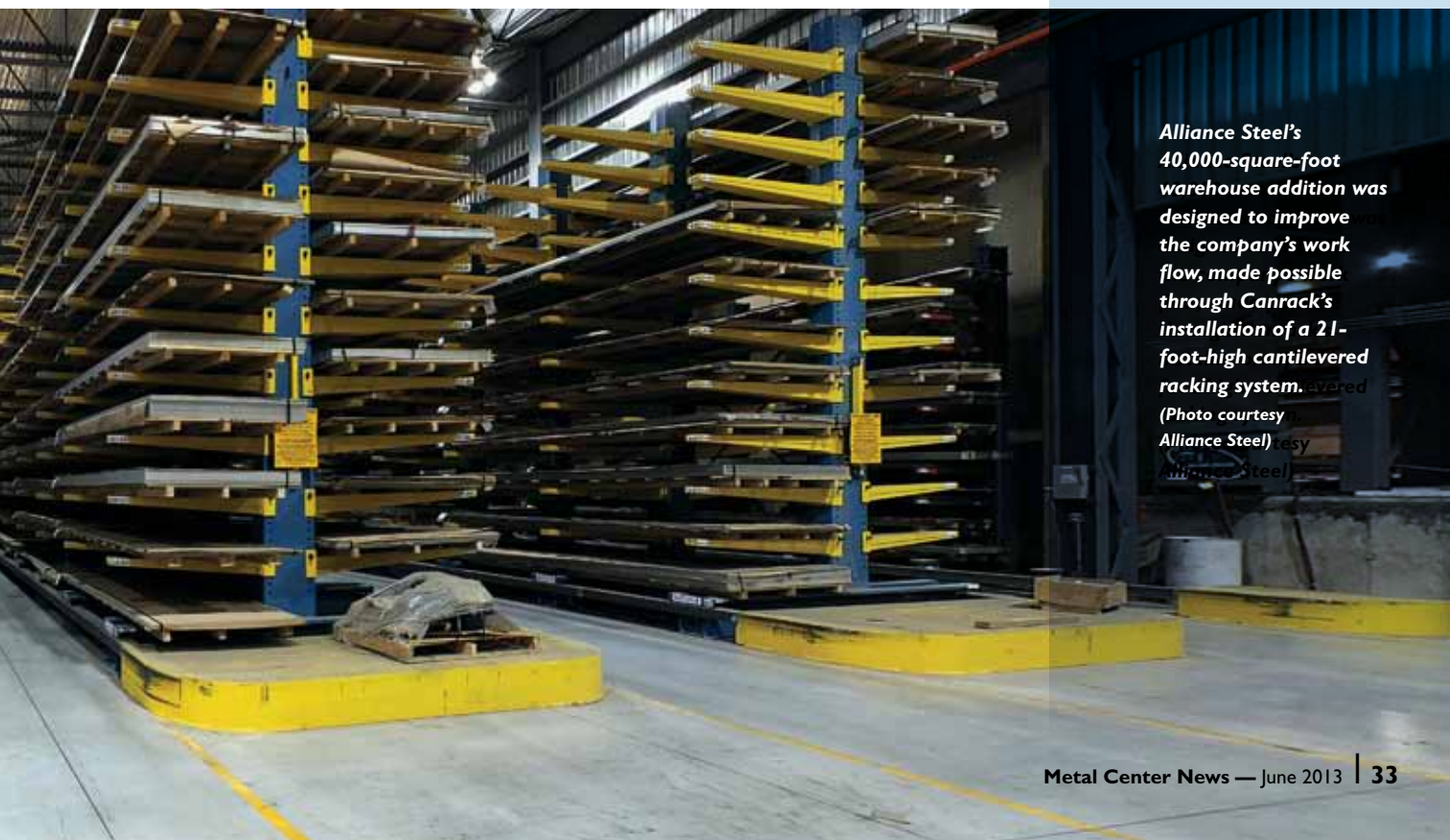
Key Executives: Michael Deitcher, president and co-owner; Glenda Susser, vice president, secretary-treasurer and co-owner.

Facilities: One 150,000-square-foot warehouse.

Products: Flat-rolled carbon steel, aluminum and stainless steel.

Services: Cut-to-length, multi-blanking, shearing, customized inventory management.

Equipment: Red Bud multi-blanking line with two Herr-Voss levelers, capacity to 5/16-inch by 72 inches wide; Red Bud multi-blanking line with Herr-Voss leveler, capacity of 10 gauge by 72 inches; Delta Brands 10-gauge by 72-inch cut-to-length line; Cincinnati 1/4-inch by 12-foot mechanical shear; Cincinnati 3/8-inch by 12-foot hydraulic shear; Promecam 1/4-inch by 10-foot hydraulic shear; Canrack racking system and bundle splitter; HUBTEX sideloader.



Alliance Steel's 40,000-square-foot warehouse addition was designed to improve the company's work flow, made possible through Canrack's installation of a 21-foot-high cantilevered racking system. ***(Photo courtesy Alliance Steel)***

sideloaders and had a security assessment done covering the new racking department. We were reassured by the sideloader people that it didn't take long to learn and that it was very robust and secure equipment. Now our operators run around the building like it's second nature."

The sideloader from German company HUBTEX, combined with the Canrack-supplied bundle splitter, have paid dividends since their installation in late 2012. The primary benefit is throughput. The company estimates it now moves metal through its warehouse three times quicker than when it used floor piles and cranes to lift and store material.

"If you've got a pile of five skids on the floor and you're crane-dependent, you can only use that crane to move one skid at a time," explains Jason Clark, vice president of engineering for Canrack. "Often the skid you want is on the bottom of the pile. So you have to move four pieces to get to the one you want, and you have to leave spaces open so that when you move the skids you've got a place to put them."

(Photo courtesy Alliance Steel)

The process for improving throughput is enhanced with the use of a bundle splitter, which allows operators to pick the exact number of sheets required in a single pull.

Instead, an operator now drives the sideloader to the rack where the material is located, guided by inventory information in the computer, and grabs the skid of steel or aluminum sheets. The skid is placed on a conveyor, where another worker counts down the number of sheets needed and inserts a polished pick wedge on the front edge of the stack. Using a remote-control, the operator conveys the stack into the bundle splitter. This action separates the sheets above and below the pick wedge. The picked sheets then move down the conveyor for banding and packaging, while the sideloader operator places the balance of the original bundle back into inventory.

"As long as the operator can count the number of sheets he needs to pick and knows how to push buttons, he can pick a 6,000-pound order in one pull," says Clark.

Crucial to the implementation of the effective racking system is a well-designed inventory management program, Clark says. "When you have a cantilevered rack system, you're only as efficient as your inventory regulations. If you don't put things in the right place, it's very difficult to find them."

Deitcher had that in mind with the software upgrade. The new software includes location codes for the inventory. Bar codes are scanned and updated every time product is moved.

"We've been able to increase the throughput of our order fulfillment department. We're able to do more orders on one shift now than we were able to do on three shifts before. We had people working on aluminum and stainless orders day and night and we were always behind in our work," Deitcher says.

Since there's generally less handling of the material with the new system, the amount of damage to the aluminum and stainless pieces has been reduced substantially.

"It's such a delicate product, it seems every time you look at it you scratch it," Deitcher says. "By having the bundles stored in a secure location, there's no excess handling of the material." The result is less damaged material and scrap and more satisfied customers.

The ability to deliver small, clean orders is particularly important for Alliance, considering its customer base. Unlike neighboring province Ontario, the end-users in the Quebec region are typically smaller OEMs and fabricators. Small-quantity orders are the rule.

"Our customer base is diffuse and varied. Our customers buy in small to medium-sized orders. Truckload quantities are not as common in Quebec as in other markets. We're not talking huge volumes, so we do it carefully so the customer who places an order for five sheets will receive five good sheets," Deitcher says. ■