

Organization made

EASY

At **Electralloy's** new facility, a conveyor and racking system makes storing steel safer

BY LAUREN DUENSING

Initially, stacking products on the shop floor might seem like no big deal. But suddenly, one pile turns into 10, then 20, and all of a sudden, there's neither a place for everything nor everything in its place. Instead, there's a cluttered, possibly unsafe environment.

When planning a new facility, Electralloy, a G.O. Carlson Inc. company, Oil City, Pa., turned to Steel Storage Systems Inc., Commerce City, Colo., for assistance with its product handling and organization.

Electralloy is a supplier of a wide range of products, from low-alloy steel to complex high-temp alloys. "We're a custom melter of specialty steels and a producer of ingots, billets, bars, and ESR and VAR products," says Mike Evans, manager of technical services and wrought products.

The company's bar and billet business has grown significantly in recent years, and, as a result, it made the decision to move the division from an outdated, small facility to a brand-new finishing and storage facility in Titusville, Pa.

Electralloy's current improvements included installing conveyors and racks from Steel Storage Systems. "They initially installed two conveyor systems to serve their saws late last year," says Brian McCallin, president, Steel Storage Systems. "They learned about our SpaceSaver roll-out racks and realized their value storing work-in-process and finished bars. They acquired two racks for trial and recently followed up with the purchase of six more racks."

McCallin says one of Electralloy's con-

veyors has 20-foot powered infeed and outfeed roller conveyors with vertical guide rollers and can handle up to 50-inch-diameter bars weighing 80,000 pounds.

"Not only must the conveyor be robust for such a significant load, but it also must have the power and control to finesse the bars for exact positioning," he notes.

This heavy, large material is a challenge for many conveyor systems. "All the band saw manufacturers we purchase saws from provide conveyor systems for their tables; however, we've experienced that they're underpowered and undercapacity for our needs," says Evans. "Steel Storage Systems provided a heavier-duty, more powerful system, which was more amenable to the weights we routinely carry, all the way up to a large billet that may be 34 inches square and weigh upward of 60,000 pounds."

The other conveyor is capable of handling 12-inch bars, and it features a powered cross conveyor for staging and loading, a 20-foot powered infeed roller conveyor with vertical guide rollers, a 20-foot powered outfeed roller conveyor and a pushbar discharge system.

"This has become their workhorse saw," says McCallin. "The complete handling



system permits the operator to saw without interruption for loading and unloading."

Cranes versus fork trucks

Material handling at the new facility is done almost exclusively with overhead cranes. "The newly opened plant in Titusville, Pa., is a finishing facility," McCallin says. "Material is trucked there from [Electralloy's] various locations for surface finishing and sawing. The plant is



Heavy-duty conveyors help Electralloy handle large material.

equipped with several overhead cranes, thus the need for a racking system that's designed for that use. Cranes were implemented as a safer handling means to their previous forklift method.

"The SpaceSaver Racks are particularly well-suited to this application because of [Electralloy's] extraordinary heavy capacity and their overhead crane handling," McCallin continues. "SpaceSavers feature drawers that roll out for direct exposure to an overhead hoist, enabling the operator to immediately load or retrieve material. You can't do that with a cantilever rack because you need the forklift to reach inside the arms to pull the material out. That's the basic difference between our racks and cantilever racks.

"SpaceSavers feature roll-out drawers that open for direct exposure to an overhead hoist for loading or retrieving material," McCallin notes. "Material is stored densely and is 100 percent accessible. Another feature of the racks is their ultrahigh-molecular-weight plastic drawer liner and dividers. The liner prevents contamination of the stainless steel material, and the dividers provide individual compartments for added storage density."

Safer, cleaner floorspace

High storage capacity helps SpaceSavers live up to their name. Electralloy's current setup has a "total capacity of about 600 tons in a 1,400-square-foot space," according to McCallin.

"We're using it as storage for finished material, but some of it will also be used for racking work in process," says Evans. He points out that the system "takes up a minimum footprint. Rather than storing material on the floor or on supports on the

floor, we're using these racking systems to reduce the square footage required to store this material, whether we're storing it for days, weeks or months for finished goods, or whether we're just storing it for hours or days for work in process."

As a result, Electralloy has seen a reduction in damaged material. "One, it's not moved as much, and two, there's protection built into the racks to protect the bar surfaces," Evans notes. "We've seen a tremendous improvement over our old facility, partially because we have the racks with the protection in them and partially because we're moving the material with cranes as opposed to moving it with fork trucks. We don't use fork trucks at all to load the racks. In our old system, we actually had a few racks, but they were all loaded with fork trucks. In fact, most of the material handling at the old shop was done with a fork truck."

One of the most important benefits of the racks is that they make the workplace safer. "Keeping more floor area clean helps from a safety standpoint," Evans says. "As far as the safety of the racks themselves, we've been really dependent on their design to provide the safety for us. The way [Steel Storage Systems] designs the racks with the roll-out drawers, it stops and prevents bars from actually rolling out of the racks. In fact, the racks are capable of being freestanding. The two trial racks were installed freestanding. In the long term, as an additional safety factor, we'll probably have them bolted to the floor, but they do work as a freestanding unit."

Electralloy is currently installing six more racks, which are more specific to length requirements and the number of racks needed per length category.

"The first two racks we bought, we wanted to make sure we could use them for the long end of the 20-foot or 30-foot bars," says Evans. "We wanted to try them out and see where we were going to put them, how we were going to use them and find out if they met all our needs."

Once the company ensured that the racks were a good fit, "the next six racks we're installing are sized to the products that we make, which are the 10- to 14-foot bars or the 14- to 18-foot bars."

Evans says the collaboration with Steel Storage Systems went smoothly, both with the conveyors and the racks, adding that the company was "very helpful and designed the system that we wanted."

"We proposed rack models and accessories specific to their needs," says McCallin. "We also assisted in determining the best layout of the racks in their plant. It was important to place the racks strategic to their processing and shipping areas."

And everyone receives this type of personalized attention from Steel Storage Systems. McCallin notes that the company specifically tailors its conveyor and racking systems to each customer's needs. "We account for the details of the machine it serves, the desired layout and the material to be handled. Addressing details and prescribing the right system is the difference between just being operational and fully productive." ■

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