



CAPACITY CUSHION

Metal framing manufacturer installs slitter to boost output, quality and service, and shrink lead times

BY CORINNA PETRY

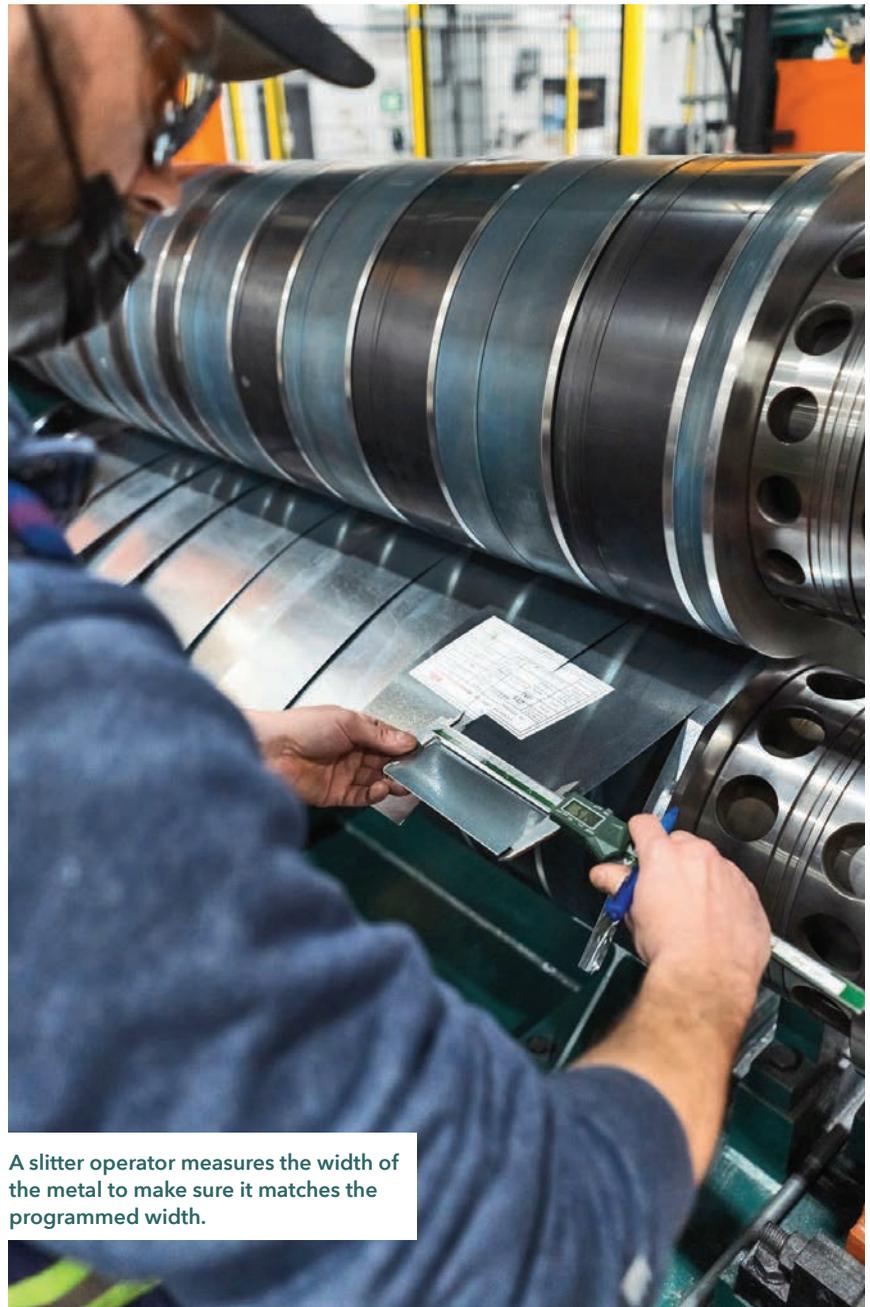
Bailey Metal Products Ltd., based in Concord, Ontario, roll forms structural steel studs and tracks used for floor and ceiling joists, axial load-bearing walls and curtain walls; non-load-bearing

studs and tracks; and steel framing accessories such as channels, backer bars, Z bars, wind braces, clips and grommets.

“Bailey historically has made metal framing, structural and nonstructural, and a wide variety of drywall and other metal trims,” says Operations Vice President Mark Griffioen.

“We make a lot of other products, such as decking and roofing materials. We are the leading framing producer in Canada.”

Bailey Metal Products sources galvanized steel coils from mills and, for a long time, it shipped those mill coils to metal processors or service centers to have them slit to size. The



A slitter operator measures the width of the metal to make sure it matches the programmed width.

Bailey Metal Products installed an Athader slitter to bring coil processing in house.

smaller coils were then brought in house to be roll formed.

“We developed relationships with domestic mills, bought the steel and sent it to be processed,” Griffioen says. About 15 years ago, the company’s owners “decided to get into slitting to support our products. We acquired a couple smaller companies that were struggling and began to do that slitting for ourselves.

“We formed a company called Bailey Metal Processing,” he continues. “In Ontario, we

supplied our own needs and did some third-party processing” with a total of three slitting lines.

GAINING CONTROL

In Surrey, British Columbia, however, Bailey operated an older model slitter that lacked a looping pit. “The type of slitter we had previously was a pull-through slitter, so tensioning was done with paper,” says Griffioen. “Without a looping pit, tension and control is not done the same way.”

Because demand for building products in Western Canada has grown, “we expanded that business and needed to upgrade our equipment,” he says.

After conducting research, Bailey Metal Products chose to work with Athader S.L., part of the Bradbury Group, to build and install a high-strength slitting line and high-speed packaging line.

Steven Baker, Athader’s area sales manager, says there were safety concerns with the older slitter because operators had to physically insert paper between coils to make the tensioning work.

Because the water table is high in the region, Bailey Metal Products could not dig a 40-foot-deep pit for looping coil. Athader was instead able to build a shallow pit. “The loop doubler consists of driven rolls on a frame, creating two loops in the

COIL PROCESSING

same pit,” Baker explains. “The technology is more common in Europe, less so in North America. Europeans don’t like to dig deep pits.” The looping pit at Bailey Metal Products had to be longer, however, to accommodate the accumulation of coil. “As the gauge gets lighter, the difference in the looping pit gets bigger.”

BIGGER COILS

The new Athader line accepts coils up to 30 tons, 62 inches wide and 0.135 inch thick. Features include double eccentric slitting heads.

Baker explains this technology. “Most slitter knives get ground on the outside diameter. Most manufacturers allow for 1½ to 2 inches of grinding. Then, the operator must adjust the machine to bring the knives back together. Most have a fixed bottom or top arbor and move the arbor up or down to accommodate the ground knives.”

The double eccentric slitter “is a more complex machine,” says Baker. “There are more moving parts, more parts to maintain over time, but it provides a better cut, appearance and edge. That’s very important. It avoids getting a ragged edge or not having the edge cut exactly flush. You want a clean edge.”

Clean cuts on the galvanized steel also produce less wear and tear on the roll forming machinery that makes the studs.

AUTOMATION

Other features include automatic coil loading, automatic tool changer and an automated overarm tooling separator. The packaging line includes hoppers for skids. “Once the stack is moved down the line, the next skid is automatically brought into place for the next coil and it’s indexed into the machine.

“The packaging station can be run by one person,” says Baker. “Once you program in the desired widths, the line can run in automatic sequence. The conveyors all have sensors that automatically index the coil throughout the system. The sensor knows if a particular conveyor is empty and will index a new coil into the space. As coil moves through the line, as long as the next position is empty, it automatically indexes through the conveyors.”

The banding station is also automated—it measures the coil and adds bands, then moves it into the stacker. The banded slit coils are picked up by forklift and placed in inventory.



Bailey Metal Products now brings in mill master coils because its slitter can handle up to 62 inches wide.

The automation, says Baker, “reduces the time spent on each coil to a minimum. Most slitting lines are only 35 percent productive. The rest of the time is reloading coils and changing tooling. Our idea [at Athader] is to reduce downtime rather than adding speed. Even if coils run at 2,000 feet per minute, the real time savings is with tooling changeovers. Manually, that might take 30 minutes. If you reduce that to 15 minutes, you will double your productivity,” Baker says.

SUPPORT ROLE

Bailey Metal Products’ Griffioen says that the results he sees with the new Athader slitter are “cleaner edges, bigger coils, tighter coils. We can run larger coils on the slitter and thinner material. This gave us a lot more capability than we had before.”

The Athader line now supports slitting for two plants in Alberta (Edmonton and Calgary) and in British Columbia. “In BC, the slitter focused on our internal needs. After

upgrading to Athader, we at least doubled our capacity, maybe even three times our previous capacity,” says Griffioen. Previously, Bailey’s Alberta plants were supported only from its Ontario operation. Now that work has “moved substantially to our BC operation.”

Griffioen says that the addition of the new slitter did not lead to a workforce reduction. Instead, “we use the same number of people to make that many tons more steel.”

Bailey Metal Products’ primary goal with the equipment upgrade “was all about servicing customers. We provide the best possible service in the industry. This equipment allows us to turn material around faster. End users get higher quality products faster,” he says. ■

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