



Cleveland to Welcome the King of Cold Reversing Mills

Come July 2003, Cleveland, OH, toll processor Ferrous Metal Processing will fire up its new four-high combination reversing mill capable of rolling 60-in.-wide coil stock. It reportedly will be the largest operating reversing mill in the United States.

BY BRAD F. KUVIN, EDITOR

Cold-reduction reversing mills, or temper mills, pass coil stock back and forth between mandrels on each side of a multi-stand mill. Each pass reduces stock thickness until reaching desired gauge, reducing thickness by as much as 80 percent. Temper mills improve flatness by rolling the steel, flattening the steel without any change in temperature. The dead-flat steel, precisely gauge controlled, allows stampers to run it faster through their presses, with less worry about interference with tooling. Fabricators like the dead-flat sheet because it won't springback during laser-beam cutting and risk a collision with the passing cutting heads.

In some applications, temper-mill-processed hot-rolled P&O coil stock is of such high quality that it can substitute for con-

siderably more expensive cold-rolled coil. As OEMs look to drive material costs lower, coil-processing technology that enables a stamper to purchase hot-rolled rather than cold-rolled stock becomes more attractive. This is one reason Ferrous Metal Processing (FMP), Cleveland, OH, a toll processor of hot-rolled stock, has invested nearly \$7 million in a new cold-reversing combination mill that it says will be the largest in the country when it comes online later this year.

“Metal stampers and fabricators that want good flatness, good physical properties and precise gauge control typically can’t get it with hot-rolled,” says Ed Gonzalez, president of FMP. “Conventional one-pass temper rolling of hot-rolled steel is designed for shape control, not surface-quality and gauge control. This new high-power four-high mill for the Midwest market will provide cold-rolled quality at hot-rolled prices.”

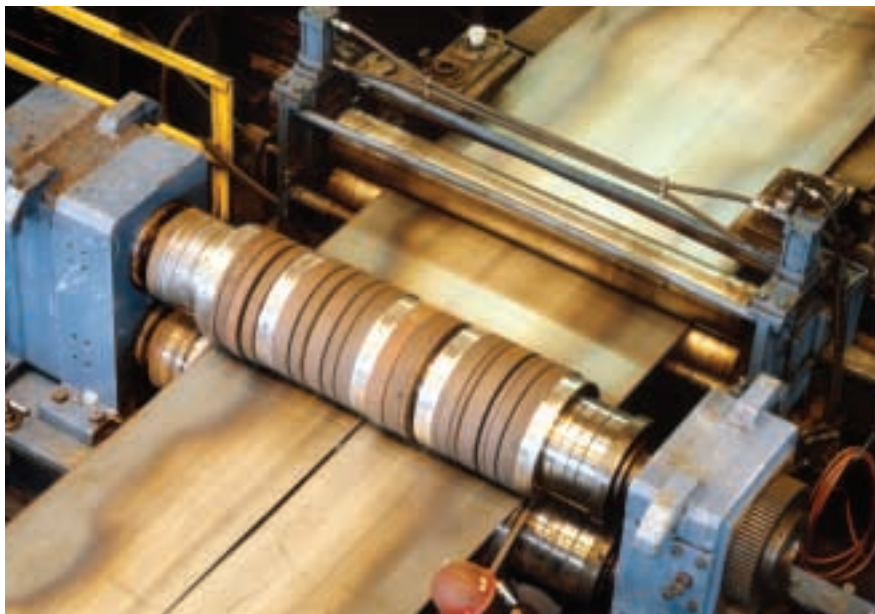
More Parts per Pound and Unit of Time

The FMP hot-rolled toll processing plant in Cleveland comprises one of three steel-processing locations owned by Farragon Corp. FMP owns a slitting and leveling facility in Iuka, MS; Farragon also owns 51 percent of Ferrolux Metals LLC in Wayne, MI, a Class 1-approved slitter for the automotive market.

FMP in Cleveland has evolved since its founding in 1983 into a full-service toll processor, reportedly offering more services in house than any other toll processor in the market.

“We tell our customers that he who ships least profits most,” says Gonzalez. “That’s why we’ve continued to invest in new processes over the years, to bring everything under one roof.” In 1995 Gonzalez completed the mission with the purchase of a push-pull pickling line. Now the firm offers pickling, slitting, cut-to-length processing, shearing, decambering, warehousing and its own trucking fleet.

Gonzalez believes that the investment in a new high-power reversing mill is extremely important for the market. “Steel mills, service centers and OEMs in this market will receive significant value from the effects we’ll have



FMP’s heavy-gauge slitter takes on material to 0.700 in. thick, in widths to 76 in.

on flat-rolled steel,” he says. “We’ll be controlling gauge to ± 0.0005 in., which will yield more parts per pound of steel. And precise control of flatness and surface finish will allow stampers to run their presses faster, so they should get more parts per unit of time.”

The United/Bliss four-high mill will process 1200-piw (lb. per in. of width) coils, to 60 in. wide. The ability to handle huge coils also should deliver value to steel-service centers that ship their coils to FMP for processing.

“We think service centers will look to work with us to reduce their inventories by as much as 50 percent in the AISI gauge ranges,” says Gonzalez. “They should be able to purchase stock in fewer thicknesses and then contract us to toll it down to specific gauges to satisfy customer needs.”

All of these benefits, Gonzalez hopes, will allow steel users some relief from higher prices.

“The market is demanding better control of all quality variables, and lower-priced steel,” he says. “That’s quite a challenge, particularly when margins are already squeezed. This new mill should provide some relief. We expect it to process 30,000 tons of material per month.” Gonzalez expects to add some 25 new employees to handle the load.

“Being able to handle 1200-piw coils is a big deal,” says Gonzalez. “We can take those jumbo coils, cut them in half and improve productivity, controlling costs and allowing us to help control costs to our customers. The mills then

can roll to their maximum diameter, which we can handle, making them more efficient. With that, coil prices should decrease. Ultimately, we’re all working to reduce the costs of getting good, valuable product to the market.”

Technology in Abundance

FMP’s new mill boasts the latest and greatest in rolling technology. Included is a Bliss hydraulic automatic gauge control (HAGC), “rather than the older-style electromechanical screws used to control gauge and elongation,” comments Gonzalez. Also on board are state-of-the-art drives and controls from GE.

“It’s a Level II control system,” says Gonzalez. “We will input starting gauge, tensile and yield strength, width, elongation and hardness, and tell the controller where we want to go with the steel. The controller then will automatically map out a rolling schedule to get there.”

The mill will fit right into the high-technology environment at the FMP facility, which also features what Gonzalez refers to as the only hot-rolled slitter between Cleveland and Chicago with a strand extensioner inline. “This allows us to wind tighter coils and improve shape—we can eliminate wavy edges, oil canning and quarter buckle.”

FMP can level strip to 40 ft. long, to 96 in. wide with close-tolerance flatness. It also has a strip decamber line capable of straightening strip to within $\frac{1}{8}$ in. in 40 ft. “The truck-frame builders like that perfectly straight stock,” says Gonzalez. MF