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The Eliminator combines a Herr-Voss Stamco precision leveler with a Butech Bliss stretcher.

# SUPERSIZED CAPABILITIES

A toll processor pairs a large-scale stretcher leveler with an equally large leveler to create a unique processing line

BY MEGHAN BOYER

**F**or FerrouSouth, bigger is better. To create a competitive advantage in the marketplace, the toll processor recently installed a large-scale stretcher leveler capable of stretching material up to ½ inch by 96 inches wide at its Iuka, Miss., facility. The stretcher is one of the most-powerful lines in North America.

Branded “The Eliminator,” the stretcher leveler from Butech Bliss, Salem, Ohio, is designed to produce more than 4 million pounds of stretching force and eliminate internal stress from ultra-high-strength, high-yield material and produce laser-flat sheets. The stretcher leveler is situated in-line with a Herr-Voss Stamco ½-inch-by-96-inch 11-roll precision leveler, which will increase the processing range and performance of the stretcher.

“What we’ve done is put a line together that allows us to provide our customers with flat, completely memory-free steel needed to meet the ever-escalating demands of today’s advanced manufacturing,” says Eduardo Gonzalez, president of FerrouSouth. “By offering processing on a toll basis, we enable our

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customers to enter new markets and pursue new opportunities without investing in their own processing lines. We are making customers more and more competitive and are helping them to grab market share from their competitors by virtue of the quality and service we provide.”

FerrouSouth, a division of Ferragon Corp., is exclusively a toll processor of hot-rolled steel. Located at the Port of Yellow Creek in Iuka, Miss., at the intersection of the Tennessee River and Tombigbee Waterway, FerrouSouth is directly in the traffic lanes of steel commerce in the South. The facility is situated at the docks and can receive material by rail, barge and truck. Although its key market areas include Mississippi, Alabama, Georgia, Tennessee and east Texas, FerrouSouth can provide direct rail access to all major cities and ports in Mexico, as well.

In addition to stretcher leveling, the toll processor currently offers precision slitting from 0.054 inch to 0.625 inch by



Before and after examples of the line stretching the memory out of ¼-inch-by-96-inch material.

72 inches, leveling from 0.060 inch to 0.565 inch by 96 inches and universal mill plate leveling from 0.125 inch to 0.565 inch by 4 inches to 29 inches.

“We installed the stretcher leveler because we do a lot of cutting-to-length leveling and we wanted to take our capabilities up a notch,” says Gonzalez. The company has two cut-to-length lines it used prior to the purchase of the stretcher

leveler. “Even though they did a great job of flattening, a fantastic job, the market just keeps demanding a greater and greater level of flatness and memory loss,” he says.

The industry continues moving to advanced high-strength steels and ultra-high-strength steels, and FerrouSouth customers had expressed a need for the types of material and level of flatness the stretcher leveler can provide, says Gonzalez. “The higher the tensile property and yield properties of steel, the more separating force you’re going to



need to remove the memory from it, to exceed the elastic limit. We just tried to get ahead of the curve,” he says.

Interest among companies in larger, more forceful equipment is growing, says Jock Buta, executive vice president of Butech Bliss. The trend is related to greater demand from automotive and tube and pipe manufacturers looking for higher-strength and heavier-gauge material, he says.

### A unique setup

The Butech stretcher leveler is a custom design created to fit the size of material FerrouSouth wanted to process and also built to fit into the confines of the existing line components, says Buta. “The actual size is dictated by the width, the thickness and the highest-yield-strength material that they wanted to process,” he says.

The FerrouSouth stretcher leveler is capable of 2,220 tons of stretching force. In comparison, the next largest one to date built by Butech for continuous strip was 1,500 tons, Buta says. Butech worked to fit the stretcher leveler and a brush scrubber into the line at FerrouSouth among the existing leveler and an existing shear.

The setup of the line is unique because the stretcher leveler is partnered in-line with the Herr-Voss Stamco leveler, says Gonzalez.

“Most of the stretcher levelers out there just use flatteners in front of the stretcher leveler and depend on the stretcher leveler to do the flattening and the memory elimination. We don’t,” he says. “We flatten with our Herr-Voss Stamco leveler, which is a phenomenal piece of equipment. Then we remove the memory with the stretcher.”

Many companies do not choose to arrange their processing equipment in this way because of the cost involved in purchasing both the stretcher and the leveler, says Gonzalez. “But when you are a toll processor and processing is all you sell—you don’t sell steel—you had better be able to be the best at what you do, and that’s what we did,” he says.

“We can level and cut to length, but a customer also has the option if they want to stretch an item, they can stretch it. So we can do one or we can do both,” says Gonzalez.

Another unique aspect of the line is its ability to stretch floor plate and eliminate memory without disturbing the raised pat-

tern. “We just grab it and stretch it and the pattern is unaffected,” says Gonzalez. This capability has opened a market for FerrouSouth, and the customers have come quickly, he says.

The line also is outfitted with a surface brush system to create a cleaner product. When producing a hot-rolled product, the scale breaks up and flakes on the surface as the material stretches because the scale is not as pliable as the base metal. “We brush it and vacuum it off so we give customers a cleaner hot-rolled product,” says Gonzalez, noting the hot-rolled pickled-and-oiled material doesn’t need the brush system because of the pickled surface.

So far, FerrouSouth’s customers have been impressed with the material coming from the upgraded line. “They’ve all been extraordinarily excited,” says Gonzalez. “We’ve picked up market share.”

### Building bigger equipment

Buta anticipates interest in larger equipment will continue as the demand for high-strength materials is unlikely to decrease, and Butech Bliss is preparing for it. As equipment sizes increase, the challenges associated with building, shipping and installing each piece also grow.

For Butech, shipping the equipment to FerrouSouth created logistical challenges, says Buta, noting each of the stretch heads weighs more than 150,000 pounds.

“Literally, we had to take some extra design considerations just for handling it during the manufacturing process, including some different manufacturing approaches that could deal with equipment this big to get it done,” he says.

With more companies interested in larger equipment, Butech is working to change its methods to make it easy to manufacture and ship large-scale pieces. “We are specifically looking to alter some of the head design in order to facilitate handling. We basically are looking to modify the design so it can be broken down into smaller pieces for easier shipping,” says Buta. ■

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The stretcher in the final phases of production at Butech Bliss’s facility.



The line can produce finished sheets from 60 inches to 684 inches long and widths from 36 inches to 96 inches.

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## Leveling

	Heavy Gauge	Light Gauge	Narrow Width
Gauge Range	.112" - .500	.054" - .135	125" - .565"
Width Range	30" - 96"	30" - 72"	4" - 29"
OD Inbound	40" - 80"	40" - 80"	30" - 72"
ID Inbound	20" - 32"	20" - 32"	18" - 30"
Weight	80,000 lbs.	60,000 lbs.	20,000 lbs.
Length	60" - 720"	30" - 240"	60" - 480"
Pack Height	Up to 18" incl. skid	up to 18" incl. skid	12"
Pack Weight	40,000 lbs. Max	40,000 lbs. Max	20,000 lbs. Max

## Stretcher Leveling **NEW THE ELIMINATOR**

Gauge	Width	Length	Elongation	Stretching Force
.100" - .500"	36" - 96"	60" - 720"	2% max	2,200 tons max

### TYPICAL MEMORY FREE FLATNESS

Incoming Shape	Yield Strength	Outgoing Shape
≤ 100 I-Units	≤ 70,000 psi	≤ 5 I-Units
> 100 I-Units	≤ 70,000 psi	x 20 improvement
≤ 100 I-Units	> 70,000 psi	≤ 8 I-Units
> 100 I-Units	> 70,000 psi	x 10 improvement

## Slitting

	Heavy Gauge		Light Gauge	
	Inbound	Outbound	Inbound	Outbound
Gauge	.125" - .625"	.125" - .625"	.054" - .250"	.054" - .250"
Width	15" - 76"	4" - 72"	15" - 60"	2" - 60"
OD	36" - 80"	36" - 76"	36" - 80"	36" - 76"
ID	20" - 32"	24" or 30"	20" - 32"	20" or 24"
Weight	80,000 lbs.	80,000 lbs.	80,000 lbs.	60,000 lbs.

Gauge	.054	.250	.375	.437	.500	.565	.625
Mults							
50 ksi	14	12	8	6	5	4	1
80 ksi	14	12	8	6	4	3	1