



Big River Steel Keeps Productivity in Place with Southern States Millwrights

When Southern States Millwrights began work on the construction of the Big River Steel Mill in Osceola, Arkansas in November of 2015, the job was originally meant to only last a few months. But because of the millwrights' delivery of safe, productive and accurate work, the union contractor was asked to stay on and tackle more work.

The project is nearing completion with a week or two left to tie-up loose ends and load-out equipment, and the Southern States Millwrights continue to turn out safe, productive work daily.

"The SSMRC millwrights showed a willingness and a want to get the job done. And I give them high marks for their focus on safety," said Rob Dolacki, Construction Manager with Stevens Engineers & Constructors.

The millwrights were tasked with installing equipment, performing precision alignment, welding and rigging in the Tandem Cold Mill, Skin Pass Mill, and Batch Anneal Furnace installations.

Gary Wharton, project manager with Stevens Engineers & Constructors, said the millwrights also assisted in



installing exit end equipment at the Hot Strip Mill when Big River Steel needed to meet critical scheduling requirements.

The jobsite employed crews of 10-24 millwrights at a time, representing SSMRC Locals 216 and 1192. They netted more than 5,000 hours in the first two months, and then nearly another 40,000 hours in 2016.

Contributing to History

Working on the project also means being part of history. Big River Steel is the world's first Flex Mill, which means it merges the wide product mix and superior grade capabilities of an integrated mill with the technological advances of a mini-mill. But, you can't have a Flex

Mill without the essential equipment for production. And starting in December 2015, the millwrights helped install the mill stand shoe plates in the TCM.

(Below) Finish Mill Housings before all the cladding installation





Mill stands dressed out and ready for commissioning

“The alignment of the shoe plates is critical because this determines the location of the housings and their final alignment—and ultimately the alignment of all the equipment inside the mill,” Wharton explained.

“The tolerances for the shoe plates are .002 of an inch for level and line over the distance of the length of the shoe.”



Automatic roll change cars to get the work rolls that will be put into the mill stand

Once the shoes were set and sold off, the mill housings were rigged into place and set on the shoes. The housings weigh approximately 110 tons each.

“There is a machine fit from the housings to the shoes that is so tight when the shoes are landed in position, that you cannot see the gap with the naked eye. This is why position is so critical,” Wharton added.

Another critical contribution from the millwrights was helping install the mill housing separators, which are also machined and keyed, and tie the housings together. While the housings were being set, they also installed the Main Mill motors and pinion gearboxes. The motors weigh about 30 tons each and have to be aligned within .002 of an inch.

Other work on the project included installation of the inner stand equipment, automatic roll change cars and backup roll sleds, plus two tension reels which coil the final product and several coil transfer cars, and walking beams that carry the coils to the shipping bay.

The millwrights also installed an inspection station with a strip turner and other ancillary equipment such as a walking beam conveyor.

Big River Steel is the only North American mill to connect an Electric Arc Furnace with a Ruhrstahl-Heraeus degasser, which is able to achieve “world class carbon and nitrogen levels that are required by more advanced products,” according to the company website.



Tension reel motors and pinch roll motors

“This is a landmark facility for Arkansas and the United States, and the Southern States Millwrights are remaining diligently focused on getting their work done far beyond the satisfaction of our employer and the project owner,” said Wayne Jennings, Executive Secretary-Treasurer of the SSMRC.

“We worked very hard to be a part of this historic facility’s construction, because we know that our work product will ensure the creation and efficient operation of a world-class facility for years to come.”

Big River Steel expects to produce 1.6 million tons in its first phase of hot rolled, hot rolled pickled & oiled, cold rolled, cold rolled lamination and galvanized steel, consuming about 2 million tons of metallics annually.



Learn more about the Southern States Millwright Regional Council



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