

Phone: +49 211 881-4449  
Fax: +49 211 881-4386  
Mobile: +49 151 40226502  
E-mail: thilo.sagermann@sms-group.com  
Thilo Sagermann

**PRESS RELEASE**

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Production of high-end steels in the U.S.A.

**Groundbreaking: Big River Steel and SMS group to build most eco-friendly steel mill in the U.S.A.**

The ground has been broken. The ceremony marking the start of the ambitious greenfield steel project on the Mississippi River in Mississippi County, Arkansas, U.S.A. took place on September 22, 2014.

The SMS group will be responsible for the supply of the entire plant technology. SMS can look back on more than 30 years of successful and trustful cooperation with John Correnti, the initiator of the Big River Steel project. As early as in July 2014, Big River Steel LLC. and the SMS group had signed the contract for the construction of this future-oriented steel complex.

As early as in July 2014, Big River Steel LLC. and the SMS group had signed the contract for the construction of this future-oriented steel complex. As a provider of integrated systems, SMS will supply all plants complete with the electrical and automation equipment, and the environmental systems. "The first touchdown has been scored," says John Correnti, Chairman and CEO of Big River Steel. "Now, we will need some good passes and a high-speed 25-yard sprint once in a while to make sure that this project becomes a success. With the SMS group, an experienced systems supplier and reliable partner, at

our side, we are certain that we will accomplish this goal.” Steel production is scheduled to start in spring 2016.

The new mill’s product range will be focused on demanding steels, such as tube grades for pipeline construction, silicon steels for electrical applications and AHSS grades (Advanced High-Strength Steels). There is a growing market for these products in the U.S.A. “Especially the automotive industry needs AHSS grades,” explains Correnti. “The carmakers are looking for higher-strength and lighter-weight steels. High strength is needed to be able to fulfill the exacting safety requirements, and lower weight to reduce fuel consumption.”

Setting up the new steel complex at a location in the southern part of the U.S., brings Big River Steel very close to important players of the automotive industry, its future customers. The fact that the U.S.A. is still required to cover a considerable portion of its steel demand by imports indicates that there is definitely a market for steel. “In future, we will be the most modern steelmaking facility in North America,” adds Correnti.

“We are extremely pleased to continue our longstanding cooperation with such a large-scale project.” John Correnti was instrumental in initiating the SeverCorr complex which SMS Siemag constructed in 2007, also in the southeast of the U.S.A. “We can contribute our experience from comparable large-scale projects. In addition to our proven technology, we will also employ new-generation systems at Big River Steel,” explains Project Manager Axel Sprenger of SMS Siemag. Big River will receive all plants and equipment, including the mechanical, electrical and automation systems and the coil logistics, from systems supplier SMS. In the first construction phase, the mill will produce 1.5 tons per year of hot strip, which will be directly processed into cold roll strip and hot-dip galvanized sheet in the downstream processing facilities. It is planned to step-wise

double the production and broaden the electrical sheet portfolio in several expansion stages.

For the first construction phase, SMS will supply a 150-ton electric arc furnace, a 150-t ladle furnace with two treatment stations and a 150-ton RH-TOP plant (Ruhrstahl-Heraeus). The steel mill will be equipped with a gas cleaning plant, which will ensure compliance with the stringent environmental standards in place. The dust will be collected and filtered in a baghouse facility. "This steel mill will certainly be one of the cleanest steelmaking facilities in the U.S.A.," says Sprenger.

With a maximum strip width of 1,930 millimeters, the downstream single-strand CSP<sup>®</sup> plant with a six-stand rolling mill will be the widest of all CSP<sup>®</sup> plants in operation in the market. The initial annual capacity will amount to 1.5 million tons. At a later stage, a second casting strand will be added, increasing the annual capacity to 3.0 tons. Approximately one third of the products made on the CSP<sup>®</sup> plant will be sold as hot strip of various grades. The other two thirds will be processed in the pickling line. Approximately 120,000 tons per year thereof will be sold as pickled and oiled hot strip. The pickling line will be coupled with a five-stand tandem rolling mill.

About 900,000 tons of the pickled hot strip will be rolled on the tandem mill. The coupled pickling line/tandem mill will be equipped with an SMS laser welding machine, a descaler and a turbulence pickling section. The laser welding machine will also be able to reliably join the high Si-steels planned to be produced at some time in the future. Approximately one half of the cold rolled strip will be further processed in the continuous galvanizing line (CGL), the other half in the batch annealing furnace (BAF).

The offline skin-passing mill, arranged downstream of the batch annealing furnace, will be designed to operate with a rolling force as high as 18-MN, facilitating elongation rates of up to 8.5 percent. The strip widths will range from 914 to 1,880 millimeters, thicknesses from 0.28 to 1.4 millimeters. The rolling speed will be 1,000 meters per minute.

The Big River Steel project is one of the biggest orders in the history of the SMS group. SMS will supply all electrical and automation systems for the plant equipment. The X-Pact<sup>®</sup> automation package will include process automation (level 1) and the technological process models (level 2). The automation systems will be tested with the Plug & Work procedure developed by SMS Siemag before they are installed on site, ensuring trouble-free processes and smooth operation. For the DC electric arc furnaces, SMS will also supply the high-current system including the transformers.

Big River Steel plans to produce hot strip in various grades as well as cold strip made of carbon steels and of non-grain oriented (NGO) silicon steel in the new steel mill. Non-grain oriented Si steel is used in electrical engineering applications, for example, for making rotating parts in motors. The continuous process route will produce hot-dip galvanized cold strip, including strip made of multi-phase steels. These products will be used in automotive applications, mainly for structural parts.

[www.bigriversteel.com](http://www.bigriversteel.com) / [www.sms-group.com](http://www.sms-group.com)

Supply scope of the SMS group:

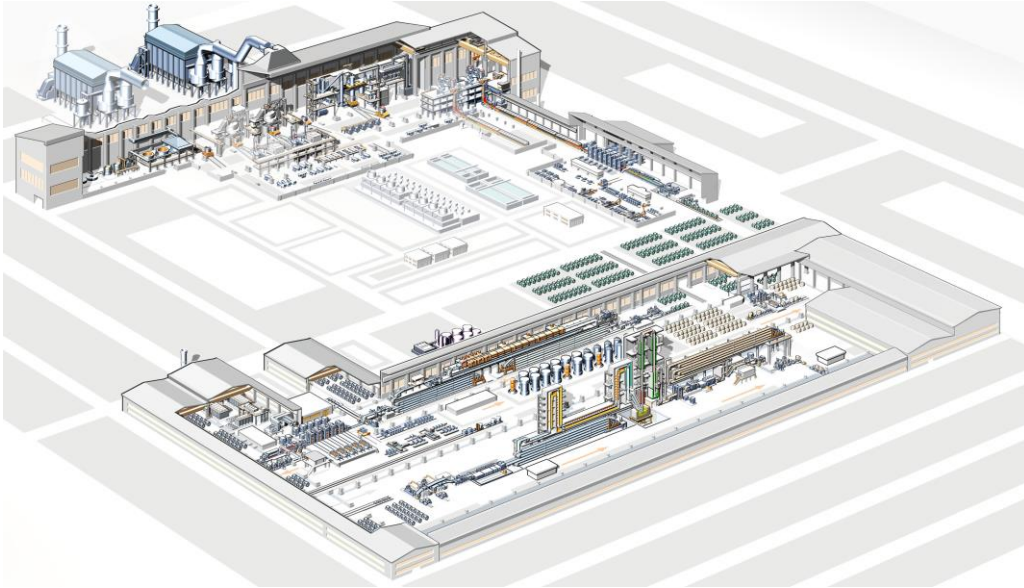
- 150-ton electric arc furnace
- 150-ton ladle furnace with two treatment stations
- 150-ton RH-TOP plant
- Gas recovery system

- High-current system for the DC EAFs, including transformers
- Single-strand CSP<sup>®</sup> plant (expandable to two strands) with a six-stand rolling mill for a maximum strip width of 1,930 millimeters
- Coupled pickling line/tandem mill, including CVC<sup>®</sup> plus, hydraulic screwdown, multi-zone cooling, emulsion system and innovative fume extraction system
- Offline skin-passing mill (SPM) with 18 MN rolling force
- Inline skin-passing mill (ISPM)
- Continuous galvanizing line (CGL), including a Drever furnace, an ultra-fast cooling system for high-strength dual-phase grades and a FOEN air-knife system
- Batch-annealing furnace (BAF)
- X-Pact<sup>®</sup> electrical and automation systems.

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John Correnti, Chairman and CEO Big River Steel, Dr. Heinrich Weiss, Chairman of the Advisory Board of the SMS group, and Mike Beebe (Gouverneur von Arkansas) and break the ground for the new steel mill in Arkansas.



Future-oriented steel plant of “Big River Steel”  
(construction phases 1 and 2).

The SMS group is, under the roof of SMS Holding GmbH, a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. Its workforce of more than 13,800 employees generates sales worldwide totaling EUR 3.5 billion.