

# CASE OF SUCCESS

## GALVANIZING PRODUCTION AT WORLD - LEADING STEEL MILL



In a major \$2.2 million (€1.87 million) project for the company, Nutec Bickley FIS has played an important role in the establishment of one of the world's most advanced mills – that of Big River Steel in Osceola, Arkansas, USA.

**Nutec Bickley** was contracted by technology provider SMS Group (via furnace designer Drever International) to fabricate the 44 modular sections of a continuous galvanizing furnace line. The project scope included all steel works, supply of insulation material and mechanical assembly of radiant tubes, all combustion pipework relating to the air, gas and nitrogen piping system, as well as electrical workshop prewiring of furnace sections.

Big River Steel is the world's first Flex Mill™, merging the wide product mix and superior grade capabilities of an integrated mill with the flexibility and technological advancements of a mini mill. The Osceola mill has a production capacity of around 1.6 million tons per annum, and this includes many of the most demanding niche steels that are currently in great demand in the US automotive market.

The steel casing weight of the galvanizing line fabricated by Nutec Bickley was approximately 210 metric tons – including ASTM A36 and high temperature resistance stainless steel components. The furnace itself runs 24/7 and has a maximum operating temperature of 1300°C (2370°F). Nutec Bickley was also responsible for the refractory installation, including brick floors and castable refractory sections.

“Big River Steel set the quality bar high for this greenfield plant and wanted to ensure it was equipped with the most advanced technology in order to meet the demands of steel customers today and in the years ahead,” commented Alfonso Lugo, FIS Manager. “We were delighted to be chosen for the fabrication of the galvanizing line and this is further evidence of the expertise, reliability and value offered by Nutec Bickley.”

Multi-zone furnaces require top performing insulation for optimal results and the FIS team elected to use Nutec's own HPS MaxWool insulation in this project. MaxWool ceramic fiber blanket is composed of long, flexible, interwoven fibers manufactured by the spun process, yielding a strong, lightweight, durable product. MaxWool HPS is made from a blend of alumina and silica and is suitable for continuous use up to 1177°C (2150°F). HTZ grade MaxWool was also used on this project for ultra-high-temp zones. It is suitable for continuous use up to 1325°C (2420°F) and has a maximum use limit of 1425°C (2600°F).

This groundbreaking steel mill is a strong reference for Nutec Bickley's technical capabilities and its ability to contribute a vital role in large, complex plant fabrication and installation. Across the entire facility, Big River Steel lays claim to being the largest industrial project in the history of the state of Arkansas, with over \$1.3 billion (€1.1 billion) invested. Significantly, it is the only steel production facility to be LEED certified, reflecting compliance with US EPA standards and even stricter European environmental standards. It is also the only steel producer to be invited to become a member of the Center for Collision and Safety Analysis.



*Do you have a planned project that could benefit from Nutec Bickley's fabrication and installation expertise?*

*Contact us today to discuss how we can efficiently and cost effectively bring everything to fruition for you:*

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