

# Nucor DRI Facility

St. James Parish, Louisiana



## HISTORY

Nucor Corporation, the largest steel company in the United States, was looking for a way to increase its competitive advantage in the industry. One way was to invest in a direct iron ore reduction facility. This process involves converting natural gas and iron ore pellets into high-quality DRI (direct-reduced iron), which is the raw material used by Nucor's steel mills. Not only does this process employ the latest technologies to reduce emissions, but it also provides a low-cost environment and operational flexibility.

## PROBLEM

Due to the large quantities of natural gas used during the direct iron ore reduction process, Nucor needed to build its DRI plant in an area that was plentiful in producing natural gas. Transportation was also an issue that needed to be addressed, as the direct-reduced iron needed

to be transported to the steel mills easily and efficiently. Once a suitable site was identified, a dock needed to be built that could handle the building materials for the plant, as well as the outflow of materials once production began.

## SOLUTION

The construction of a barge loading/unloading dock facility on the Mississippi River was needed. The facility offloads ocean going ships loaded with iron ore. The iron ore is transferred to a processing plant on land by a conveyor system. After processing the ore, the reduced iron is returned to the dock facility for loading onto barges for shipment to steel mills which produce steel plate and other steel products.

Nucor contacted many pipe manufacturers for this project, but working with Nucor Skyline, a privately-held company, was the best option as they were able to produce all the products

## PROJECT PARTNERS

### Owner

Nucor Corporation – Charlotte, NC

### General Contractor

Massmann Construction Co. –  
Kansas City, KS

## PRODUCTS

Pipe Pile: 18" to 96" OD x 80' to 115'

## PROJECT TIME FRAME

May 2011 to April 2012

needed for many stages of this construction project.

Nucor Skyline was able to use the steel coil produced in Nucor's Decatur, AL facility and transport it by barge to the Skyline facility in Iuka, MS. At this plant, the coil was rolled into the proper-sized pipe, ranging from 18" to 96" for the project. The pipe was needed in lengths varying from 160 to 230 feet, and was produced in half-lengths, and barged from the Iuka plant to a vendor in New Orleans where it was welded to full length. At this point, it was transported up the Mississippi River to the Nucor DRI facility in Convent, LA to be used as the foundation of the dock facility.

Skyline Steel, LLC became a wholly-owned subsidiary of Nucor Corporation after the completion of this project.