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PRESS RELEASE

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Higher flexibility, lower energy input and wider product range

SMS group successfully implements new modernization concept for CSP[®] plants at Nucor Steel

SMS group (www.sms-group.com) has successfully completed the modernization of the CSP[®] plant (Compact Strip Production) at Nucor Steel in Berkeley, South Carolina, U.S.A.

The objective of the modernization was to upgrade the double-strand CSP[®] plant, supplied by SMS group in 1996, to the grown requirements of the market. With an increased final strip width of 1,880 millimeters (formerly 1,680 millimeters), Nucor Steel now operates one of the widest CSP[®] plants in the world. At Nucor, SMS group for the first time implemented a new modernization concept designed to expand the product range and reduce energy consumption at the same time.

The implemented measures comprised the revamp of one of the two CSP[®] casters, the extension of the CSP[®] rolling mill, renewal of the X-Pact[®] electrical and automation systems and, as a premiere, the installation of an induction heating system from SMS Elotherm, (www.sms-elotherm.com), upstream of the CSP[®] rolling mill.

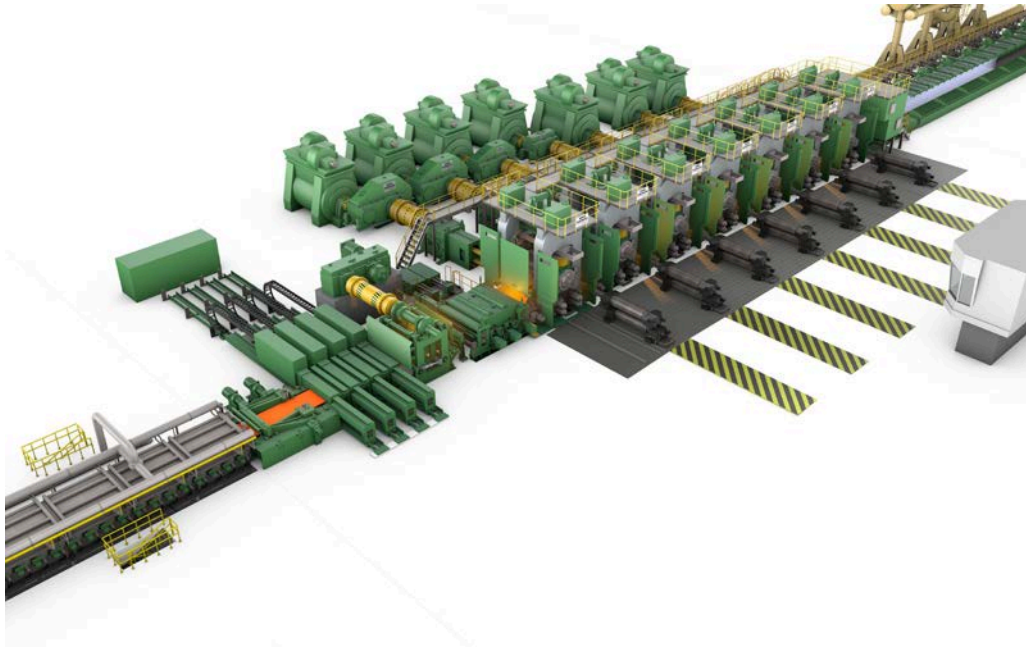
The CSP[®] caster was fitted with new molds, a new four-cylinder oscillation system, wider segments, and a new bending and

straightening unit. Thanks to the implementation of the Liquid Core Reduction (LCR 3) module in the containment zone, the thickness of the thin slabs can be infinitely adjusted between 48 and 63 millimeters.

SMS group added a seventh finishing stand to the CSP[®] rolling mill. The new stand features CVC[®] plus technology, like the stands F1 through F6. The CSP[®] rolling mill also received a new X-Pact[®] level-2 automation system including profile, contour and flatness control systems as well as a cooling model.

With the installation of an induction heating system between the CSP[®] furnace and the CSP[®] rolling mill, SMS group implemented a future-oriented modernization concept at Nucor Steel. By means of the induction heating units supplied by SMS Elotherm, it is now possible to increase as required the temperature of the thin slabs right before they run into the rolling mill. This enables Nucor Steel to achieve greater reductions per pass and expand its mix of products in the thin gage range.

An additional benefit of the inductive heating systems is the fact that the energy consumption of the CSP[®] plant can be even further reduced. By flexibly adjusting the thin slab temperature prior to rolling, the furnace temperature can now be lowered to a level suitable for rolling the major part of the steel grades and strip gages without compromising process stability or the product quality. For all strips requiring a higher entry temperature, the inductive heating systems will be there to provide the extra heating. By means of this concept, it is possible to achieve both the extensive product range typical of the CSP[®] technology and marked savings on energy.



At Nucor Steel Berkeley, the new modernization concept with inductive heating systems between CSP[®] furnace and CSP[®] rolling mill was implemented for the first time.

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