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PRESS RELEASE

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Galvanized hot strip for the US market from an efficient high-performance plant

Nucor Steel Gallatin orders hot strip galvanizing line with unique “heat-to-coat” technology by SMS group

SMS group (www.sms-group.com) was awarded the order to supply a “heat-to-coat” line with an annual capacity of 500,000 tons for Nucor Steel Gallatin in Ghent, Kentucky, in the USA. The “heat-to-coat” technology is characterized by the compact and operator friendly U-shape design, the turbulence pickling system, the high-power inductive heating system, the FOEN galvanizing equipment and the Drever after pot cooling system. With the high production rate of 180 tons per hour and the large strip cross section (up to 6.35 millimeter thickness and up to 1,854 millimeter width) this line sets a new worldwide standard for hot strip galvanizing. Nucor decided in favor of SMS group due to the outstanding reference situation and the capability to deliver the whole line from a single source as a system supplier. Startup is anticipated for 2019.

The “heat-to-coat” process based on SMS patented technology excels with its high profitability, as all processes take place in a single facility. The process permits the production of galvanized steel strip with durable corrosion protection, an appealing visual appearance, as well as an increased mechanical load-capacity while still maintaining low production and investment costs. Due to the integrated inductive

galvannealing furnace the line is also able to produce galvannealed strips.

There is a broad area of applications for galvanized hot strip, especially in construction, transportation and automotive industry. Furthermore, it is possible to substitute galvanized cold strip with hot strip.

The “U-shape” design allows a quick and easy bypass of the coating section in order to use the line as a continuous pickling line and produce just pickled and oiled material. Since entry and exit are located side by side also fewer staff is required.

Furthermore, the “heat-to-coat” process stands for an environmentally-friendly production of galvanized material since the whole process takes place in one line and uses efficient technologies. Compared to the conventional process some process steps are even omitted. Another advantage is the inductive furnace which operates with electrical energy and therefore emission free. Furthermore, a special fume exhaust system will be integrated which ensures low emission rates for the whole process.

The line is equipped with numerous high-performance plant components for an economical and reliable production. An X-Pro[®] laser welding machine is being integrated which stands for fast and safe welding. Efficient descaling without overpickling takes place in the turbulence pickling system. The powerful induction furnace serves for the high production rate. The zinc layer thickness is precisely adjusted by a FOEN air-knife system, which is especially equipped for galvanizing of thick hot strips. The aerodynamically optimized nozzle-module design minimizes strip vibration while maintaining high cooling capacity in the Drever cooling section.

For post treatment a skin pass mill, a tension leveler and a horizontal roll coater system are integrated.

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The new SMS group "heat-to-coat" pickling and galvanizing line for Nucor Steel Gallatin will be capable to produce 500,000 tons of galvanized hot strip per year.

SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 13,500 employees who generate worldwide sales of more than EUR 3 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.