

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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Direct heat treatment saves energy

New heat treatment concept for Deutsche Edelstahlwerke from SMS group

Deutsche Edelstahlwerke GmbH has placed an order with SMS group (www.sms-group.com) for a heat treatment line for its Witten site, Germany. For the first time this will enable bar steel in the size range up to 250 millimeters diameter to be heat treated directly in the rolling line. The separate heat treatment process that was previously required can then be eliminated, thus saving a large proportion of the heating energy. Throughput times of the material will be significantly reduced, intermediate storage is no longer required.

The new heat treatment line will be integrated into the material flow of the existing rolling mill. Here individual bars can be transported on a roller table to a temperature equalization furnace. Depending on the quality demands, this process is employed during the production of RSH steel (stainless, acid and heat-resistant), high-grade structural steel or tool steel. After heating, the bars are cooled selectively to the desired temperature on a cooling section so that the envisaged properties are precisely achieved. This is controlled by the CCT[®] (Controlled Cooling Technology) simulation model.

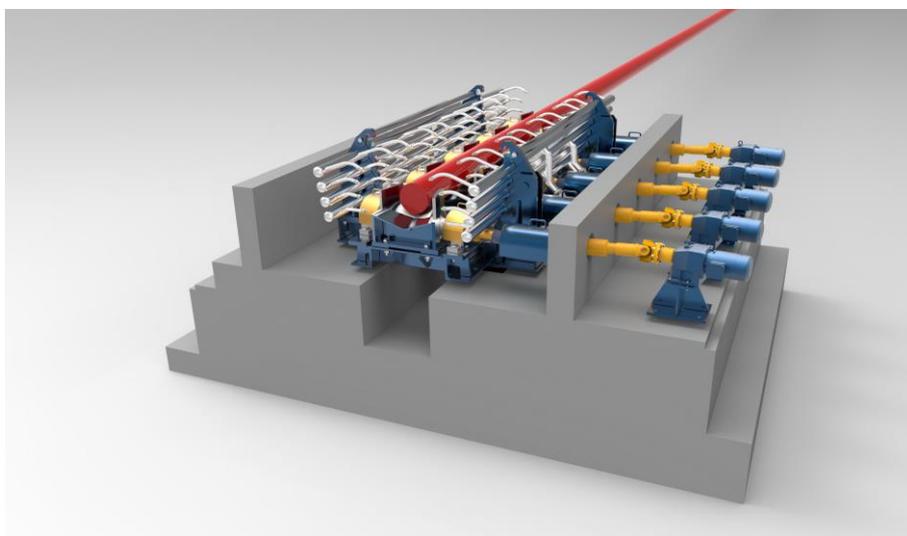
The temperature equalization furnace is constructed as a walking-beam furnace and designed for energy efficiency, temperature uniformity over bar length and cross-section as well as low emissions. A level 2 system ensures the efficient operation of the

furnace. The system calculates the thermal profile of the bars. Each zone temperature setpoint is monitored by the level 2 system in order to ensure proper heating of the bars.

From the point of view of quality, the new line enables tighter process parameters to be observed. These relate not only to the directly measurable properties of the steel, such as narrower strength range and grain size range, but also to the reduced inherent stress condition and even higher homogeneity of the product. The surface quality will improve measurably, also allowing more precise testing. For stainless steel, a further improvement in the general corrosion resistance can be expected. The new process is tailored to each individual customer's requirements.

SMS is to supply the complete line, including electrical equipment, automation system and erection. It will be erected in accordance with the latest environmental standards for air, noise and water pollution and will satisfy the IEC Energy Efficiency Directive. SMS will commission the line at the end of 2016.

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The new cooling element in the heat treatment line. Ten of these elements in the cooling section at DEW ensure that the temperature of the bars can be precisely set.

SMS Meer GmbH is a company of the SMS group which, under the roof of the SMS Holding GmbH, consists of a group of global players in machinery and plant construction in steel and nonferrous metals processing. Its workforce of more than 13,800 employees generates sales worldwide totaling EUR 3.5 billion.