

PRESS RELEASE

Düsseldorf, January 11, 2021

Successful “first plate” produced with the X-Roll® MultiFlex-Quench from SMS group at Ilseburger Grobbblech

Highly flexible cooling enables wider heavy-plate range



The first plate on the new X-Roll® MultiFlex-Quench supplied by SMS group was produced on 23 November 2020.

On November 23, 2020, Ilseburger Grobbblech GmbH successfully heated the first heavy plate in its heat-treatment furnace No. 1, followed by the subsequent

successful cooling in the new X-Roll®. MultiFlex-Quench (MFQ) supplied by SMS group Thanks to the closely coordinated and targeted collaboration during the assembly and cold commissioning phases, production of the “first plate” could take place eight days before the originally scheduled challenging deadline.

The MFQ plant is part of a new, energy-efficient heat-treatment line supplied by SMS to the Salzgitter Group subsidiary.

With the extremely flexible cooling strategies enabled by the now commissioned new quench, Ilsenburger Grobblech GmbH is now able to expand its product range to also include particularly demanding grades.

With the X-Roll® MultiFlex-Quench, SMS has established a new and innovative cooling technology in the market, providing significantly more options than conventional cooling lines. By means of switchable pressure ranges any cooling strategies from extremely slow cooling to fast quenching with freely selectable cooling-stop temperatures can be implemented. Thanks to the variable settings, the MFQ enables a significantly larger product portfolio than conventional quenches. The plates are hydraulically clamped by roller guides, ensuring optimal flatness, especially of thinner plates.

A prerequisite for homogeneous cooling and optimal product properties of the plates is high temperature uniformity during both plate heating and the tempering process that follows quenching. For this purpose, SMS supplied two state-of-the-art roller hearth furnaces, which both feature energy-efficient heating systems and modern low-NOx burners for low-emission operation.

In addition, SMS is supplying a X-Roll® MultiFlex ? Leveler T for the heat treatment plant. While providing proven functions, this new leveler type sets new standards in terms of final flatness and residual stress distribution in the material. Among other things, new back-up rolls for maximum load transfer were developed specially for this machine type and tested on SMS's own test stand. The quick-acting leveling roller adjustment system enables – in addition to variable strategy selection to effectively remove even complex flatness

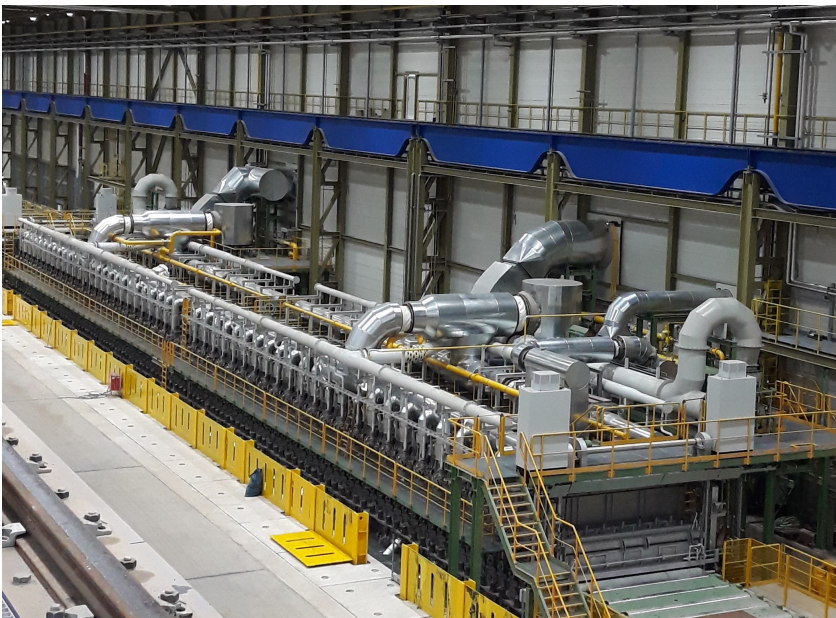
deviations – the application of the E-mode (Extended-Roll-Mode), which greatly increases the leveling range of the machine. The functionality range of the X-Roll® MultiFlex – Leveler T is rounded out by a bending system with the possibility of specific leveling gap adjustment, a system for load balancing of the individually driven main drives as well as a highly dynamic main adjustment system.

Besides the X-Roll® MultiFlex-Quench, the X-Roll® MultiFlex – Leveler T and the two furnaces, the SMS group supplies include a shot blaster, a primer line and a water-treatment plant, all complete with X-Pact® electrical and automation systems. Powerful X-Pact® process models, including a material model, ensure the correct setting of the equipment and the achievement of the desired material properties. The scope of supply also includes ancillary equipment such as the plate conveyor system, the cooling beds, and the plate feeding and centering equipment.

The new heat treatment line will process more than 200,000 tons of heavy plate per year. It is designed to handle plate in thicknesses between 5 and 175 millimeters and widths up to 3,500 millimeters. The between 4 and 24-meters-long plates will weigh up to 28 tons. The material grades to be processed will include high-strength carbon steels, highly wear-resistant steels, steels for offshore and pressure vessel applications as well as case-hardened and quenched/tempered steels.



The flexible cooling strategies of the X-Roll® MultiFlex-Quench at Ilseburg enable a broad product portfolio of current and future grades.



Equipped with an energy-efficient heating system, the roller hearth furnace supplied by SMS group is characterized by low emissions.



The X-Roll® MultiFlex ? Leveler T sets new standards in terms of the quality of final processing of the material and of the final plate product.

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 14,000 employees who generate worldwide sales of more than EUR 2.9 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.