

PRESS RELEASE

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Ilseburger Grobblech orders future oriented heat treatment line with MultiFlex-Quench[®] from SMS group

High-efficiency heavy plate heat treatment line to
produce a wide range of high-quality products



Layout of the heat treatment line complete with leveler,
cleaning and priming line, and water treatment plant.

Ilseburger Grobblech GmbH, a wholly owned subsidiary of the Salzgitter Group, has awarded SMS group an order for the supply of a new heat treatment line, project name "Adjustage II". The line is the centerpiece of a project initiated by Salzgitter to strengthen the heavy plate activities at its Ilseburg site in Germany.

SMS group will supply a highly energy-efficient heat treatment line capable of fulfilling the customer's extremely exacting quality and flatness requirements. The flexible cooling strategies enabled by the integrated MultiFlex-Quench[®] will make it possible to produce a very wide range of products, also in extremely challenging grades.

With this investment in innovative technologies, Salzgitter is taking a decisive step to make the Ilseburg location fit for future challenges. The new facilities to be built there are to process more than 300,000 tons of heavy plate annually. Commissioning is scheduled to take place early in 2020.

The new heat treatment plant to be supplied by SMS group to Ilseburger Grobblech GmbH will essentially consist of a shot-blaster, two roller hearth furnaces, the MultiFlex-Quench[®], a plate leveler, a cleaning and priming line, and a water treatment plant.

SMS group is also going to supply the electrical and automation systems and implement the material and process models. Also all the ancillary facilities such as the plate conveying system, complete with the cooling beds and the plate feeding and centering equipment, are part of the supply package.

Additionally, the project will involve the relocation of

equipment from the Salzgitter location to Ilseburg.

This project will be SMS group's third single-source supply of a complete heavy-plate heat treatment line to renowned European steelmakers in quick succession. At the same time, SMS group has established the MultiFlex-Quench[®] in the market as a new, innovative cooling technology that provides much more potential and flexibility than conventional cooling systems. After the Slovenian heavy-plate producer Acroni, Ilseburger Grobblech will be the second reference worldwide for this new technology.

The new heat treatment line is to anneal and further process more than 200,000 tons of heavy plate per year. It will be 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.

For hardening and normalizing, the plates will be heated to temperatures of up to 950 degrees centigrade in a high-temperature roller hearth furnace. The furnace will feature two chambers with different temperatures. The plates will be heated by radiant tubes in a nitrogen-based inert gas atmosphere.

A large portion of the plates will be cooled in the downstream MultiFlex-Quench[®], which provides extremely great flexibility in terms of cooling strategies. Switchable pressure ranges allow any cooling patterns from extreme slow cooling through to abrupt quenching with freely selectable cooling stop

temperatures to be implemented. This flexibility provides the possibility of producing a much wider range of products than would be achievable with conventional quenches. Optimal flatness, especially of thinner plates, is ensured by hydraulic clamping by roller guides.

A low-temperature furnace installed in the line will be used to temper (warm up) the plates. In this open-flame roller hearth furnace, the plates can be tempered at temperatures between 300 and 750 degrees centigrade. A specially designed waste gas system provides for optimal convection within the furnace chamber, resulting in maximized temperature uniformity.

The leveler will be designed to handle plates between 5 and 25 millimeters thick and up to 500 degrees centigrade hot. All leveling rollers can be separately adjusted. Thus it is possible to apply different leveling strategies in order to minimize the internal stresses of the plates and achieve plates of very good flatness. Driving the rollers separately makes it possible to distribute the torques and use different roller diameters within one set of rollers.

Ilseburger Grobblech GmbH (ILG) is a subsidiary of Salzgitter AG, one of Europe's leading steel technology groups. The about 750 employees of ILG produce approx. 700,000 tons per year of heavy plate in about 350 steel grades for most diverse fields of application. This makes ILG one of the leading heavy plate producers in Europe.



With the MultiFlex-Quench[®], SMS group has established a new innovative cooling technology in the market. The highly flexible cooling strategies enabled by the new system form the basis for the production of a wide range of current and future grades. (The photo shows the first MultiFlex-Quench[®] installation at Acroni in Slovenia.).

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.