

## PRESS RELEASE

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# Shanxi Taigang Stainless Steel Co., Ltd. orders the most powerful 4.3-meter heavy-plate mill from SMS group

New development offers high forming forces and eco-friendly dust exhausting system



Comparable heavy-plate mill from SMS group.

On June 18, 2020, Shanxi Taigang Stainless Steel Co., Ltd. placed an order with SMS group for the supply of a 4.3-meter heavy-plate mill. The company is located in Taiyuan, capital of the Chinese province of Shanxi.

The heart of the new heavy-plate production plant will be a mill stand group consisting of a four-high rolling mill with attached edger.

A high rolling force and a correspondingly high forming capacity characterize the four-high stand. The combination of a very large roll gap opening with the coaxial CVC<sup>®</sup>plus system (Continuously Variable Crown) is a new development and allows the rolling stock to have an input thickness of up to 960 millimeters and thus an extremely large product range. To be able to process even short slabs, the heavy edging stand will be equipped with a newly developed support roller table.

The equipment will be designed to roll both, extreme casting block dimensions as well as small slab dimensions, down to plates. This will make production flexible and dynamic and ensure tightest geometrical tolerances.

The maximum rolling force of the four-high reversing stand will be 109 MN in order to be able to reliably roll also special materials. The mill stand will be equipped with the latest actuators to set the required plate geometry. In addition to the hydraulic roll gap adjustment, these include the patented coaxial CVC<sup>®</sup>plus technology with integrated work roll bending.

The vertical edger will be provided with a combined mechanical/hydraulic roll gap adjustment for extremely tight width tolerances.

Designed for an annual production of 700,000 tons, the heavy-plate mill will produce plates between five and 120 millimeters thick and 1,550 to 4,200 millimeters wide.

The product range will include carbon steels, quality steels, low-alloy steels, grades for ship, bridge and pressure vessel construction, weather-proof and wear-resistant plates, pipe grades according to the API standard, as well as stainless steel and nickel-based materials.

With this rolling mill, Shanxi Taigang Stainless Steel will be able to cover a very wide range of products meeting the needs of infrastructure, chemical industry and shipbuilding and will therefore be well prepared for future requirements. This includes in particular the aspects of sustainability and environmental compatibility.

The mill stand group will be equipped with a newly developed integrated dust exhausting system, which picks up dust directly at the roll gap during the rolling process. This way, emissions generated when rolling special alloys, for example, will largely be prevented.

The order scope includes the complete engineering and the supply of all mechanical core components for the most powerful heavy-plate mill stand so far in the width range of up to 4.3 meters, with attached edger, and of the X-Pact<sup>®</sup> electrical and automation system for the hot area of the heavy-plate mill.

Level 1 automation will be carried out entirely based on X-Pact<sup>®</sup> technology. The X-Pact<sup>®</sup> Vision operating concept will be implemented according to latest ergonomic findings and enable the staff to operate the system intuitively for optimal process control.

Level 2 process automation will include the technological process models from PSC<sup>®</sup> (Pass Schedule Calculation) to PFC (Profile and Flatness Control) and up to the higher-level MTS (Material Tracking System).

Before delivery, the X-Pact<sup>®</sup> electrical and automation system will be prepared for quick commissioning using the Plug & Work integration test developed by SMS group. An international team will take care of order processing and the timely commissioning of the plant.

The heavy-plate mill is scheduled to start operating in mid-2022.

The new mill is another item in a series of metallurgical equipment supplies by SMS group to Shanxi Taigang Stainless Steel in the past. The order once again affirms the trust and positive experience the customer

has with the quality of SMS group products.



With a force of 109 MN, the 4.3-meter heavy-plate mill will be the most powerful plate mill ever built by SMS group. The photo shows a comparable heavy-plate mill from SMS group.

*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.*