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Cost-efficient production of high-quality special steels

Qingdao Iron and Steel orders SBQ rolling mill from SMS group

Qingdao is to receive a 3-roll precision sizing block, Type PSM 380/5, from SMS. The photo shows a PSM in the SMS workshops in Mönchengladbach.

Qingdao Iron and Steel, based in Qingdao, Shandong province, China, has placed an order with SMS group (www.sms-group.com) to supply an SBQ (Special Bar...
Quality) rolling mill. The mill has an annual production capacity of 700,000 tons of special steel. Qingdao is thereby expanding its product portfolio to include high-quality special steels for use in the automotive industry.

“We were impressed by the SMS concept and technical know-how from the very beginning. This special steel mill will enable us to enhance our leading market position even further,” says Liu Tieniu, Deputy General Manager of Qingdao Iron and Steel who is responsible for the construction of the new plant. SMS is supplying the plant’s core technology, including an up-to-date 3-roll sizing block of type PSM® (Precision Sizing Mill) 380/5, which is capable of rolling all finished dimensions from 16 up to 90 millimeters in diameter.

Thanks to its system of hydraulic adjustment under load, all dimensions can be produced cost-efficiently on the basis of customers’ individual requirements, including even small batch sizes. The 3-roll PSM® is equipped with a MEERgauge® cross-section measuring system and “monitor control technology”. This allows corrections to be made to the finished dimensions while production is still ongoing. The plant was specially designed for the temperature-controlled rolling of bars. With its ultra-modern cooling sections, five-stand 3-roll PSM® customized cooling processes and high cross-sectional reduction capability, Qingdao is able to produce high-quality end products with excellent mechanical properties and narrow tolerances at the same time.

The full package of supplies and services is rounded off by the CCT® (Controlled Cooling Technology) system, which was developed by SMS and is used to adjust and control the requisite cooling processes. This ensures that the mechanical properties, such as the tensile strength and toughness as well as the desired microstructure of the end product, are precisely attained. The cooling bed and associated downstream equipment, designed by SMS group, are tailored to the required cooling processes. This includes an integrated quick transport system. The
plant design already takes into account the future expansion of the plant to include a coiling line.

Commissioning is scheduled for the third quarter of 2015.

SMS Siemag AG and SMS Meer GmbH are both companies of SMS group which, under the roof of SMS Holding GmbH, consists of a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry.