

Phone: +49 211 881-4449
Fax: +49 211 881-774449
Mobile: +49 151 40226502
E-mail: thilo.sagermann@sms-group.com
Thilo Sagermann

PRESS RELEASE

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Revamp in record time

PAO Severstal boosts production of tandem cold mill by 200,000 tons per year through revamp by SMS group

Russian steel producer PAO Severstal has granted SMS group (www.sms-group.com) the final acceptance certificate for the comprehensively modernized tandem cold mill “2100” at the Cherepovets facility in northwest Russia. The revamp was completed in an exceptionally short time.

The mill upgrade by SMS group comprised the complete replacement of the entry section and the four mill stands, and the installation of rolling technologies of the latest generation. These include the four-high mill stands with CVC[®]plus technology and numerous other technological actuators, the X-Pact[®] electrical and automation systems with level 1 and level 2, the X-Shape flatness measuring and control system and an assistance system to optimize threading and tailing out at each stand. A major challenge was to implement the replacement of the complete stands. The individual construction phases had to be scheduled such that the production was not to be affected until the main shutdown of the mill. SMS group planned and implemented the dismantling and assembly closely with PAO Severstal. In three of the mill stands the existing Leonard-type rolling motors were to be retained for further use, however, with state-of-the-art controls. Fitting those motors with modern control equipment was

another challenging task. Only the first mill stand received a completely new drive train consisting of a modern synchronous motor and the pertaining converter equipment, resulting in an increase in rolling speed. As a result of all these measures, rolling mill “2100” is now fit to satisfy future growing customer requirements on high-grade carbon steels, and high-strength and micro-alloyed silicon steels.

The main shutdown took only three months. During that period, the existing equipment was dismantled, the new equipment installed and commissioned, including the successful rolling of the first coil. Thanks to the meticulous planning, the Plug & Work concept implemented by SMS group and the efficient cooperation of all parties involved in the project, the conversion work and the subsequent commissioning of the plant could be performed in a record time.

The TRC[®] (Total Roll Gap Control) function implemented by SMS group has led to reduced off-gage lengths and minimized coil changing times. This function includes a model-based level-2 pass schedule system which offers the customer full flexibility in calculating target values for new product grades. Use of this function achieved product properties that were in all cases superior to those guaranteed.

Through this revamping project, PAO Severstal has increased its overall capacity by 200,000 tons to 1.3 million tons. This increase is the result of a rise in plant availability and a decrease in the coil-to-coil time.

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An investment that has paid off: PAO Severstal's extensively renewed tandem cold mill "2100" impresses with both higher productivity and efficiency.

The SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. Its 14,000 employees generate sales of over EUR 3.3 bn.