

ISSN 0935-7254

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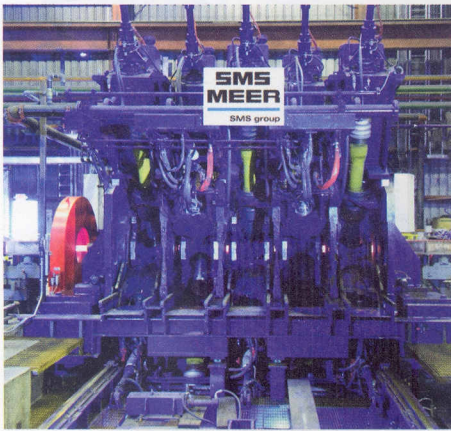
February
2012



Computer-based technology system for bar mills



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Cover photo:
3-roll-PSM® block in operation at
Timken, USA

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A. Hannewald

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Topical themes

A. Körmer, P. Thieven

34 Computer-based technology system for bar mills

The innovative concept for the rolling-mill adjustment system is characterized by flexibility and speed. The computer-based technology system CARTA® supports the planning and optimization of the rolling operation. A wide range of different steel grades can be rolled more easily and quickly with the aid of this system. The system furthermore helps with the tracking and with the utilization planning of numerous different roll ring sets.

Ironmaking

26 Third Finex plant to expand ironmaking capacities at Posco

The new ironmaking facility will produce some 2 million t/year of hot metal on the basis of directly charged low-cost iron ore fines and predominantly noncoking coal. Upon completion of the new plant scheduled for mid-2013, a total of approximately 4 million tons per year of hot metal will be produced using the Finex process at Posco.



Existing No. 2 Finex ironmaking plant at Posco, Korea

Company profile

28 Successful supply chains with maximum variety

Deutsche Edelstahlwerke is well prepared for its future international operations with a wide variety of products, services and storage facilities. In December 2011 the company completed the expansion of its storage facilities in India, doubling its warehousing capacities there to a total of 3,000 square meters.

Continuous casting

32 Morocco has started slab production

SMS Siemag put into operation the steelworks and continuous caster at Maghreb Steel in Morocco. The facilities are designed for an annual production of 1 million t of steel and will supply the Steckel rolling mill and the heavy-plate mill with input stock.



Thermo-mechanically rolled products are part of the product mix

Cold rolling

H. G. Bauer, A. Hünemeyer

44 Off-gas cleaning in a cold rolling mill

For four years, a regenerative condensation process has been used for cleaning the off-gas at a 20-roll cold rolling mill. The investment has proved to be very profitable. And not only that: the plants have also demonstrated constantly high availability and contributed to sustainable energy efficiency.

L. Biraghi, G. Grandi

40 Seamless pipe mill starts operation at Jesco, Saudi Arabia

The first seamless pipe mill complex in the Middle East features the Danieli Fine Quality Mill to provide the best product quality at competitive production costs. Being the first of its kind in this region, this project was a challenge in every sense of the word. However, all targets were met and addressed successfully by the dedicated and experienced project and operating teams.

Cold rolling

50 NAFTA region's first 72" stainless steel mill comes on stream

ThyssenKrupp Stainless USA in Calvert, Alabama is the only manufacturer in NAFTA countries for stainless steel flat products in widths of 183 cm. A hot strip annealing and pickling line and a second 20-roll cold rolling mill have gone into operation.



Plants are currently being ramped up

B. Smeulders, P. Schellingerhout, D. Paesold, M. Bergmann, K. Zeman, K. Krimpelstaetter

52 Tribological simulation models for the rolling process

In a joint cooperation between renowned partners from different disciplines involved with rolling, new tribological simulation models are being developed and optimized to provide greater insight into the fascinating world of lubricants.

Heat treatment

S. Mitra, S. K. Saha, R. S. Kumar, M. Gangadaran, B. K. Prasad, A. K. P. Singh, N. K. Gosh, S. R. Choudhary

56 Optimum control of the annealing plant at the cold rolling mill

A heating control system has been developed for the bell-type annealing furnaces at Bokaro Steel Plant. The integrated automation system is based on hierarchical control concepts. It supervises the annealing operation as per the guidelines of an expert system. The application has rendered significant improvement in plant performance in terms of productivity, quality and energy saving.

Strip processing

L. Bonagiunti

62 Coating control in electric steel production

The quality of electrical insulation coating is of paramount importance in electric steel production. This article reports on a recent commissioning of four coating machines for NGO electric steel and the implemented dedicated system for automatic coating process control. Also main results and trends are presented.

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