

**Cover photo:**

Aumund conveyor for hot sinter transport
Aumund Fördertechnik GmbH,
Rheinberg, Germany

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MPT

INTERNATIONAL

Editorial

A. Hannewald

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Topical themes

24 **METEC 2007 – International Metallurgy Trade Fair with strong innovation power**

Just a few months before opening preparations for the trade fair are running at full speed. Held every four years at the Düsseldorf exhibition grounds this highly reputed event has established itself to be one of the most important international business platforms. Suppliers of metallurgical plant equipment and technological solutions from countries worldwide will showcase the latest advances in metallurgical plants and rolling mill systems at METEC 2007.

Cokemaking

*S. Mitra, B. Chakraborty,
U. Bhaskar, B. K. Prasad,
M. S. Sengupta, V. Kumar, S. Singh,
B. K. Santra, N. Neogi, U. Pathak*

28 **Computerized heating control of coke oven battery No. 1 at Durgapur Steel Plant**

Optimum heating control is crucial in the operation of a coke oven battery, because it plays a key role in lowering the energy input and improving the coke quality. A process-model-based computerized heating control system was commissioned in coke oven battery No. 1 of the Durgapur Steel Plant in February 2006. Current trends show an improvement in the coke quality and a reduction in specific heat consumption.

Ironmaking

F. Reddemann, M. Moritz

34 **New briquette cooling technology for high-quality HBI production at Matesi**

Handling of the fragile hot briquettes is a challenging task with respect to the high output rates of modern direct reduction plants. The Venezuelan HBI producer Matesi recently implemented a novel cooling conveyor to overcome the lack of cooling capacity at the two HYL direct reduction modules.

Continuous casting

*R. Thome, V. Ostheimer, G. Ney,
F. Rüppel, A. Girgensohn,
U. Plociennik, W. Schmitz,
C. Geerkens, M. Becker*

36 **Soft reduction of continuous cast billets at Saarstahl**

At Saarstahl soft reduction technology was implemented on the billet caster S0. Using a new testing method, the soft reduction technology was inspected to assess its effect on the internal strand quality parameters.

Hot rolling

F. Toschi

44 **Operational results of the new minimill for stainless and special steel at Baosteel**

The complexity of the plant and the different process routes available both in the meltshop and the rolling mill make clear that production planning and the availability of knowledge to the whole team are fundamental to simplifying and speeding up the whole production process.



New special steel minimill at Baoshan Shanghai No. 5

26 Tenova – the new name of Techint Technologies

Techint Technologies, well-known and well-established supplier of steel plant technology operating on an international basis, has expanded its range of activities by consistently following an impressive strategy of mergers and acquisitions since 2004. Its goal was to complement its offering in terms of technologies and products and broaden its geographical presence. Now this strategy of growth has culminated in the launch of its new umbrella brand name: Tenova

Cold rolling

*G. Finstermann, A. Seilinger,
G. Nopp, G. Djumlija*

54 Comparison of 4-high and 6-high mill-stand technology in cold-rolling mills

This paper discusses various aspects of flatness control with a view to the patented SmartCrown system, flatness performance in the strip-transition area during flying strip change on a continuously operating mill, stiffness of the mill stands, and the influence on thickness performance and edge-drop control.



Siemens VAI has modelled the rolling process of tandem mills

T. Farley

62 Mill vibration during cold rolling

In common with other rotating machines, rolling mills are prone to many different vibrations during rolling. This article describes the common types of cold mill vibration that can cause problems during the rolling of steel and aluminium sheet, including third octave and fifth octave chatter.

Quality assurance

N. Moos, W. Moser

68 Combined visual and automatic surface inspection of tinplate

At Rasselstein high-precision surface inspection in tinplate production has been common practice for many years. Also at the new tinning line, which has been in operation since autumn 2005, the surface is checked by an automatic system as well as by visual inspection. Based on the good experience, Rasselstein uses stroboscopic light sources from Drello for visual inspection at the new line.

G. Mücke, F. Gorgels

70 Flatness measurement for high quality cold strip production

The well-known BFI flatness measuring device has undergone systematic further development since its first application. Now a new roll type opens up new variation possibilities of roll surface designs as well as new applications of this measuring system. This article describes the special features of the latest measuring roll generation.

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