



Cover photo:
Strip accumulator and annealing zone of a bright annealing line

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MPT

INTERNATIONAL

Editorial

A. Hannewald

- 1 The showcase for metallurgical technology is opening at METEC

Columns

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Topical themes

O. Hirche

- 38 Exact strip guidance and automatic coil change in a bright annealing line

A new continuous bright annealing line built at the cold rolling facilities of MK Metallfolien GmbH, Hagen, Germany, has received a strip guidance system of a completely new design. The line processes cold-rolled super foils which are used for manufacturing catalytic converters for passenger cars. The new line operates at minimized coil changing times. Coil change can take place semi-automatically without requiring any operator invention.

Ironmaking

- 22 Blast furnace twins for ThyssenKrupp Steel

ThyssenKrupp Steel AG is modernizing its ironmaking plants in Duisburg-Hamborn, Germany. As a core of this project, a new blast furnace is currently under construction. The project will lead to a sustainable improvement in the environmental situation around the Duisburg-Hamborn blast furnace works. Both blast furnaces will produce much less noise in the future noise and dust immisions in Duisburg-Bruckhausen will be markedly reduced.



The blast furnace twins will be given an attractive colour scheme

Events

- 24 AISTech 2007 in Indianapolis

Steelmaking

E. Cordova, M. Khan, D. Zuliani, B. Goldberg, J. Maiolo

- 28 Advanced dynamic control technology for EAF steelmaking and other combustion processes

Tenova Goodfellow Inc. has developed a reliable real time off-gas measurement and control system called the Goodfellow Expert Furnace System Optimization Process (EFSOP®). Recently an EFSOP® system was implemented for the first time ever at a basic oxygen furnace. It concludes the first phase of a joint project to reduce greenhouse gas emissions in combustion intensive industries.

Y. Toulouevski, M. Preisman, R. Hill, C. Larry

- 34 A self-cleaning, water-cooled pressure probe implemented under the EAF roof

Maintaining an optimal pressure level under the roof of state-of-the-art electric arc furnaces is of utmost importance. A new pressure probe developed by a Canadian firm has proven reliable operation at Sterling Steel, USA.

METEC 2007

- 50 METEC international metallurgical trade fair to await with high-profile conferences
- 54 3rd International Steel Conference on New Developments in Metallurgical Process Technologies
- 72 Preview of exhibitors

Continuous casting

C. Wulf, M. Hayk

36 Automatic residual burr detection on steel slabs by a thermographic system

During steel slab cutting a flow of slag solidifies as burr on the underside of the slab. The removal of this burr is inevitable. However, sometimes the deburring system slips over extremely flat burr. Currently used laser or video imaging systems for residual burr detection have not proven reliable enough in daily operation in a rough steel mill environment. But now the use of an innovative thermographic system ensures residual burr detection after the slab cutting process.



After cutting burr has to be removed reliably

Heat treatment

D. Ghira, M. Valenza

40 Radiant tube burner control in hot-dip galvanizing lines

Burner control, combustion system maintenance and efficiency problems are frequently encountered in strip annealing furnaces equipped with radiant tubes. In no way influenced by burner design or radiant tube profile, problems in ratio control and local tube overheating often occur. The new Danieli Centro Combustion radiant tube burner control system solves these problems.

Surface treatment

A. Jordan, M. Irlé

44 Controlling strip oscillation to reduce overall costs in hot-dip galvanizing

Devised as a cooperative development between ThyssenKrupp Steel AG and EMG Automation GmbH, an electro-magnetic strip stabilization system was developed to reduce strip oscillation during hot-dip galvanizing. Using this system provides for homogeneous surfaces and even layer thicknesses while operating at a high production speed and saving zinc at the same time.

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