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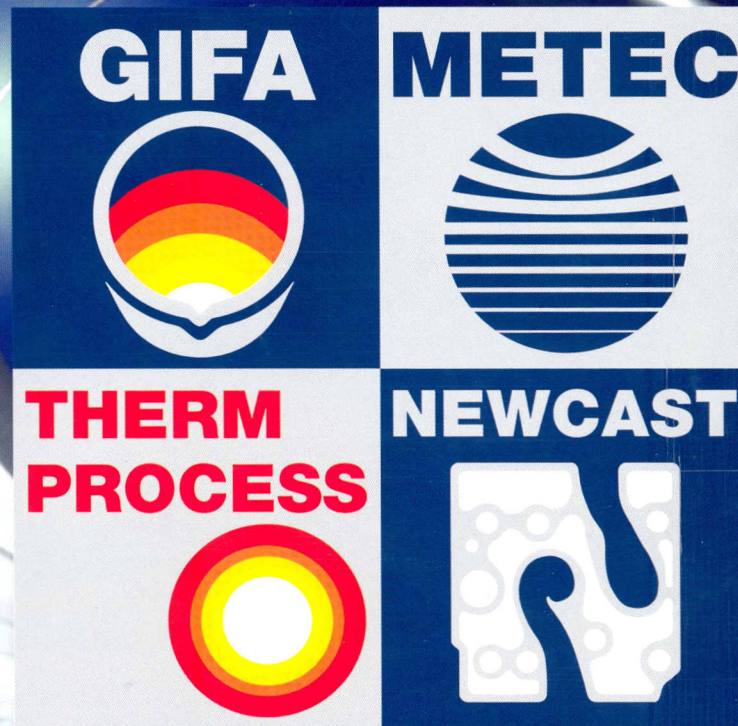
MPT

INTERNATIONAL

3

Juni
2011

The Bright World of Metals.





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Editorial

A. Hannewald

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- 34 Metec and Thermprocess – preview of exhibitors

Company profile

- 66 Siemens VAI to boost modernization and service business while expanding its portfolio of plants

The company has systematically expanded its portfolio for the modernization and service market with technical innovations and modular system packages that increase the productivity of steel plants.

Ironmaking

A. Peters, A. Kuhn,
G. Altmeyer, H.-J. Leibner

- 78 Mobile high-performance dust capturing system for bulk cargo unloading facility

A worldwide unique dust capturing unit is in use on the railway bunker unit at the ThyssenKrupp Steel Europe blast furnace operations in Duisburg, Germany.



Railway bunker unit with dust capturing hood

Steelmaking

M. Marozzi, M. Guzzon

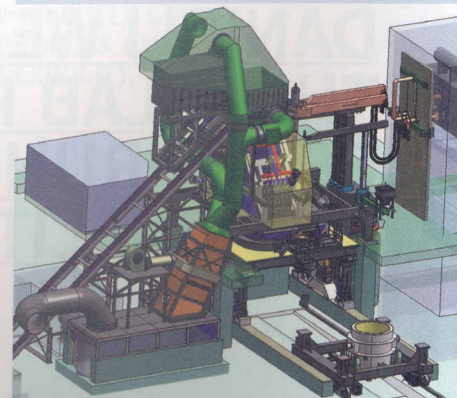
- 82 The evolution of preheating and the importance of the hot heel in supersized EAF systems

The preheating function has turned back into the focus of development in order to comply with growing energy savings and environmental requirements in western countries. A common characteristic of the new Consteel systems designs is the high hot heel.

M. Abel, M. Dorndorf,
M. Hein, H. Huber

- 92 Highly productive electric steelmaking at extra low conversion costs

Simetal EAF Quantum was designed as a pragmatic solution that meets requirements for high energy and cost efficiency, increased productivity and lowest emissions.



The EAF Quantum features a new preheating concept

C. Piemonte, A. Pigani, L. Vignolo, P. Burin

108 MMK-Atakas starts up high-capacity flat steel production site on the Mediterranean coast

With its extremely compact and streamlined layout, the new flat steel production complex is one of the most advanced and powerful EAF plants adopting thin slab casting and rolling technology. It is intended to serve the growing demand for flat steel semiproducts in the Middle East, the Mediterranean basin and the eastern European markets.

Steelmaking

U. Zoellig, T. Dreifert

98 Latest generation mechanical vacuum technology for secondary metallurgy

Newly designed mechanical vacuum solutions offer highest value and reduced cost-of-ownership for steel degassers used in secondary metallurgy processes. This article describes how these systems can help users leave the traditional beaten path of steam-injector usage.

Continuous casting

R. Cowlshaw, N. Corbett

106 In-chain slab caster measuring solution

The stand condition monitoring system introduced here is an everyday maintenance tool for continuous casting machines. Having the ability to monitor and control the condition of the strand rolls on a cast by cast basis allows maintenance and production decisions to be made on known data rather than assumed information.

Hot rolling

J. L. Casanova

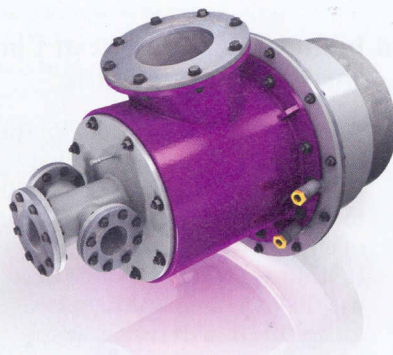
114 Mathematical model for reheating furnace control

The furnace model gives a good estimation of material heating inside the furnace and is used to adjust heating requirements to optimize furnace combustion.

P. Giraud, S. Lemaire,
P. Sedmak, D. Delaunay

120 Central wide flame burners for advanced reheating furnaces

Using this efficient technology, reheating furnaces for slabs, blooms and billets can comply with ever more stringent demands, for example, in terms of high thermal efficiency and very low NO_x emissions.



Advantek CWF burner

Hot rolling

O. Dewald, G. Ulrich, M. Kruse

124 Controlled under load: new automation system for the reducing & sizing block

A higher automation level is more than ever an important aspect for future innovations in bar and wire rod mills. A new automation system was developed to keep the production quality of rolled material on a constant high level.



Stand-AUL: adjustable under load

Quality assurance

B. Mühlheim

128 Non-contact in-line dimension measurement of long products

Modern in-line measuring systems not only provide accurate values for diameter, ovality, width, height etc., but also instantly detect shape deviations, rolling faults and other process problems. Steelmaster systems easily meet these requirements thanks to their high measuring rates, intelligent software and oscillating measuring modes.

132 3D inspection and measurement in rail manufacturing

With this new generation surface inspection systems, the entire production process will be able to be systematically optimized. First installation is under way at the rail manufacturing at Wuhan Iron & Steel Co. in China.