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MPT

INTERNATIONAL

Editorial

A. Hannewald

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Columns

- 8 International industry news
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Topical themes

M. N. Ismail

- 56 Experience with the surface inspection system at Corus Llanwern Works No. 2 pickling line

A Cognex surface inspection system was installed to assist inspectors in their daily work. The SIS has improved the effectiveness of dealing with the pickled coils. The approach of the inspectors to view the coil defect data while the coils are being processed, or after the coils have been processed, has made the system a very useful decision-making tool. The complaints from customers and downstream processes have been reduced significantly.

Ironmaking

- 28 The new blast furnaces at ThyssenKrupp Duisburg

ThyssenKrupp reached two important milestones of the modernization of the iron making facilities at the Duisburg works. The blast furnace No. 1 in Duisburg-Schwegern restarted operation in April after modernization. The completely new blast furnace No. 8 was blown in. The new unit is part of a 340 million Euro program to secure hot metal production for the company's German plants.

Company profile

- 42 SMS group achieves record business year with significant growth

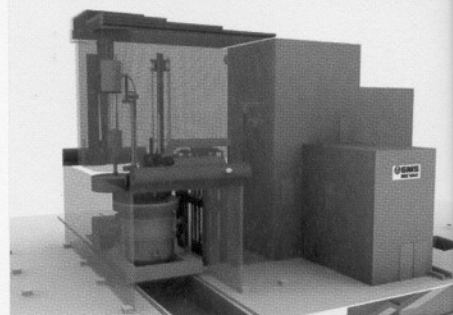
In 2007, the SMS group worldwide generated a turnover of about EUR 3.0 bn. The SMS group expects even better development in 2008. 700 new jobs will be offered for qualified machine, electrical and automation engineers. Environmental protection technology will gain in importance.

Steelmaking

Horng-Chih Hsieh, T. Eichert, D. Tembergen, R. Teworte

- 44 The new ladle furnace at China Steel, Taiwan

Taiwan's biggest steel producer modernized its existing secondary metallurgical units. Besides revamping the existing four RH units, a second completely new ladle furnace was erected and commissioned.



A doghouse encloses the treatment station

Continuous casting

S. Rintatalo

- 48 Automated on-line caster quality management

To control the slab caster quality most mills periodically take a small sample of the cast steel, etch it and then see what problems the steel may have. Now a new concept has been developed where a piece of steel can be analyzed practically on-line.

P. Schmöle, H. B. Lüngen

32 Worldwide hot metal production capacities - development, status quo and outlook

It is anticipated that world crude steel production is likely to increase by 237 million t from 1,343 million t in 2007 to 1,580 million t in 2010. To supply sufficient metallic charge materials for producing this amount of crude steel it is forecast that approximately 192 million t of additional hot metal production will be needed. This study gives an expertise of how future needs of hot metal output will be matched.

Hot rolling

M. K. A. Andersson, P. M. Fransson, A. O'Hare, R. Morley

52 Modernisation of the bar mill at Caparo Merchant Bar

To meet increasing market demand for a wider product range, the bar mill at Caparo Merchant Bar plc has gone through a number of modernisations. The recent revamp, mainly the update of the control system and installation of new stands in the roughing mill, has shown very satisfactory results.

Automation

T. Karjalainen

60 Optimizing pickling line capacity and surface quality

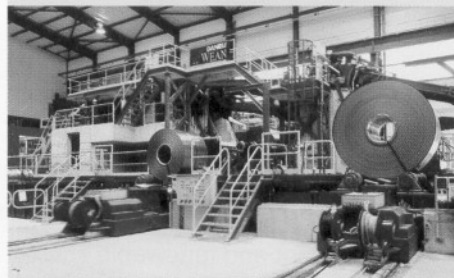
A new, extremely sensitive and stable technology capable of measuring the remaining residual scale on a pickled strip surface has been introduced. The method comprises a continuous measurement covering the entire (100%) strip surface. Connected to the Level 3 automation, the system automatically applies the correct threshold levels for guiding the line speed to meet the nominal pickling level.

Surface treatment

M. Bianco

62 The coupled galvanizing and painting line at Marcegaglia Ravenna

A state-of-the-art galvanizing line was coupled with a high-speed painting line at the Ravenna works of the Italian steel producer Marcegaglia. The innovative curing process guarantees the fastest possible control of the painting section in combination with annealing and zinc coating processes.



Entry section

G. Astengo, T. DeLoia

68 Insoluble anode technology for tinplate production

Tenova has developed a new tin dissolution process based on the technology of insoluble anodes. Main benefits are improved coating quality, better process control and elimination of phenol vapours in the working environment.

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