

**Cover photo:**  
Danieli Davy Distinguon two-strand slab caster at ArcelorMittal Sidmar plant, Belgium

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# MPT

## INTERNATIONAL

### Editorial

*A. Hannewald*

- 3 Sustainable cost cutting that pays off

### Columns

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## Topical themes

*C. P. Piemonte*

### 50 Recent developments in thick slab casting technology

Various innovative and reliable casting solutions have been developed during the last few years, for example, the patented Inmo mould concept and the Optimum segment, specifically conceived for the soft reduction process. This article describes the latest technologies as well as their most significant applications at several large scale slab casting complexes, including the Handan, Benxi and Caofedian sites in P.R. China.

## Company profile

### 30 Andritz shows solid business development

International technology group Andritz recorded a satisfactory business development during financial year 2008, despite the difficult economic environment since the beginning of the fourth quarter of 2008. Sales rose +10% compared to 2007. The order backlog was close to 4.3 billion euros.

## Cokemaking

### 32 Efficient extraction of coke-oven by-products at Isdemir, Turkey

The Turkish steel producer Isdemir expanded and modernized the existing coke-oven by-product plant to treat the increased quantities of generated coke-oven gas. This allows Isdemir to extract and sell ammonium, tar and benzene.

## Ironmaking

*R. S. Nadur*

### 36 Pulverized coal flow detectors for blast furnaces

Practical studies using different types of detectors made possible the specification of the mechanical, electric and automation design of the “pulverized coal double lance” for blast furnaces operated by the Brazilian steel producer CSN.

## Metallurgy

*J. Kempken, G. Kleinschmidt, J. Bader, U. Thiedemann, H. P. Gaines, L. T. Ames*

### 44 Integrated mini-mill: the short route from iron ore to thin hot strip

SMS Siemag and Midrex Technologies formed a strategic alliance and have teamed up to offer an integrated mini-mill concept for the production of high-quality hot rolled coils based on direct reduced iron (DRI), electric steelmaking and thin slab casting and rolling technologies.



## Events

### 24 AISTech 2009 in St. Louis, Missouri

The Iron & Steel Technology Conference and Exposition - will take place in St. Louis, Missouri/USA on May 3-7, 2009. AISTech 2009 will feature international technologies from the world over, allowing steel producers to compete in today's global market. The Town Hall Forum and the President's Award Breakfast are two exciting events planned for AISTech 2009. Key industry leaders will be featured, including John F. Ferriola, CEO of steelmaking operations, Nucor Corp.

## Strip processing

L. Bonagiunti

### 56 Upgrading of existing process lines to face the crisis

During economic downturns competition becomes tough and product quality together with production costs becomes critical for growth in a harsh market environment. These targets can be achieved by revamping existing processing lines while reducing investment costs.

## Surface treatment

K. Voges

### 68 Strip descaling and surface conditioning by Eco Pickled Surface technology

Eco Pickled Surface (EPS) is a new environmentally friendly and low cost alternative to acid pickling, providing the product with a rust inhibitive surface. This technology accomplishes mechanical removal of scale. The first processing line using this new technology has been released to book orders.

## Quality assurance

W. Tuzinsky, R. Scheuerich

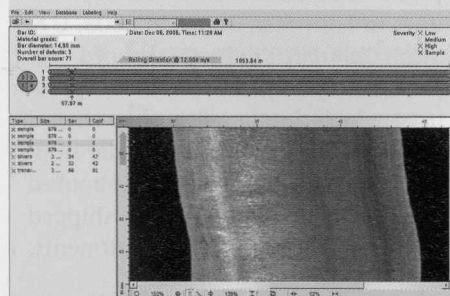
### 70 In-line dimensional measurement of long and flat products

Improvements made during the last few years in optoelectronic sensors and in the field of  $\mu$ -processors and PC hard and software have resulted in significant progress in in-line dimensional measurement of long and flat products.

Tzzy-Shuh Chang, H. Huang

### 72 The value of in-line inspection for long products

The time has come for a new phase of surface quality improvement in hot rolling of long products. A new imaging-based inspection system delivers more than the detection marks, providing rich information about the surface anomalies in near real time.



Application case of the new inspection system

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