

### from TOP Technology and Operational Practice

*Fahad Al-Thukair and Andrew Orme:*

#### **404 Integration of a cold mill and a continuous galvanizing unit into Unicoil's colour coating line**

Backward integration, existing line expansion, hot rolled material, steel, aluminium, cold rolling, pickling, hot-dip galvanizing, colour coating

*Kerstin Garbracht:*

#### **412 Boosting stagnation to success - a plantbuilder's review and prospects**

Technology of making long products, recent start-ups and commissionings, minimills, economics, future development of steel business in global market

*Fritz-Peter Pleschiutchnigg, B. K. Singh, Vilas Vishnu Jamnis, S. Singh, V. R. Sharma, Sukhdev Raj Talwar, Rajeev Sinha, Ratna Prasad V. Atluri, R. B. Singh, Atul Kumar Mishra, Prem Shankar, Rajendra K. Verma, N.C. Jain, Rajiv Thakur, Rajesh K. Goyal, Bidyapati Mishra, Deepu B., Peter Meierling, and Joseph Pleschiutchnigg:*

#### **418 Market and applications of hot strip produced in the MPS plant of Ispat Industries Ltd. in Dolvi**

Application of value-added steel grades in customized quality, hot-rolled as well as cold rolled and surface finished material, API X grades for the manufacturing of longitudinally and spiral welded tubes, application of dual-phase steels to automobile parts, e.g., wheel rims and axle housings.

*Kerstin Garbracht:*

#### **425 Conference report: 38th ECCA Autumn Congress: Towards 2010: Technology changing the future**

*Kerstin Garbracht:*

#### **430 STEEL CLIPs: Crankshaft manufacturing at Feuer power-train**

Greenfield project, manufacturing of cast and forged crankshafts for niche market

### from R&D Research and Development

*Ayman Fathy, Hoda El Faramway, Azza Ahmed, and Mamdouh Eissa:*

#### **433 Effect of alloying elements and age-hardening on the peak-hardness precipitates in low-nickel, cobalt-free maraging steels**

Maraging steels, precipitates, cobalt-free steels, peak hardness, TEM observations

*Ayman Fathy:*

#### **441 Characterization of the new tungsten low nickel, cobalt free maraging steel**

Tungsten maraging steels, mechanical properties, phase transformation



The worldwide market for steel continues booming. Steel demand figures keep on increasing and sometimes shortages occur.

To become more independent of steel supply, Saudi-Arabian coil coater Unicoil decided to extend its line by upstream flat steel produc-



tion facilities. Thus, they will soon be capable of serving a bigger market with coated sheet for structural application.

Longitudinally and spiral welded tubes and pipes for a wide range of applications are produced and offered by Ispat Industries India.





A high-value niche application of forged steel is illustrated on the example of a crankshaft manufacturer. ECCA's autumn congress showed recent trends in coil coating. Apart from technological items, a new factor more and more governing customers' decisions affects the coil coating scene: colour design. Research work must always account for the future application of steel grades. Contributions in this issue



cover structural steel, automotive grades and wire. The artefact created by two young Danish designers presented as a work of art marks a pretty comfortable steel application.



*Chen Yu, Tang Guoyi, Liu Wei, Liu Qing, Li Pinghe, and Chen Xiao:*

**The characteristics of microstructures and properties for advanced aluminum/silicon containing hot-rolled TRIP steels 446**

Super fine ferrite grain, removable dislocation, retained austenite, aluminum, silicon, hot-rolling, TRIP steel

*Satoshi Kajino, Motoo Asakawa, Wojciech Z. Misiolek, Alexander R. Bandar, and Steven R. Claves:*

**Effect of additional shear strain layer on mechanical properties of fine drawn wire 451**

Thin wire, additional shear strain layer, material's strength and ductility, electron back scatter diffraction (EBSD) method, textured orientation

*Kalyan Chakraborty, Asit B. Chattopadhyay, and Ajit K. Chakrabarti:*

**Grindability of vanadium and niobium microalloyed steels in as-forged and heat treated conditions 457**

Grindability, V microalloyed steel, Nb microalloyed steel, grinding forces, specific energy consumption, chip formation mode, chip microstructure, surface residual stress, hardness distribution across the ground surface

from P&S  
Plantmakers and Suppliers

**Investments into future -  
Plantbuilding around the world**

**Steel 463**  
**Non-Ferrous 477**

Juniors' Suite

**A chance for young talents: the RAIA and Colorbond steel Student Biennale competition 478**

A Bit of Art

**PhAT - the steely way to make yourself comfortable 480**

Columns

Impressum	<b>464</b>
Scientific Circle	<b>462</b>
Subscriber's information	<b>UIII</b>
List of advertisers	<b>417</b>

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