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Posco SS-Vina will be the second
minimill in Vietnam



Cover photo:
Rotary hearth furnace at Tenaris
Dalmine plant, Italy

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Editorial

A. Hannewald

- 3 The leverage point to increase competitiveness

Columns

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Topical themes

24 ThyssenKrupp Steel Europe with certified energy management system

ThyssenKrupp Steel Europe is now the proud recipient of ISO 50001 certification, an internationally recognized standard for energy management systems. Awarded by TÜV Nord, a German association for technical inspection, the certification is official confirmation of the importance Germany's biggest steel producer attaches to energy efficiency.

Company profile

F. Mulinaris, M. Passoni,
A. Mestroni, A. Taurino

30 Greenfield project for a one million t per year scrap-based steelworks in Vietnam

Posco awarded Danieli the order for a new minimill for long products to be built in Vietnam. This new minimill comprises an EAF meltshop, a 6-strand continuous caster for the production of billets, blooms and beam blanks and two rolling mills for rebar and heavy sections respectively. The order includes the turn-key supply of mechanical equipment, all electrical systems, the automation system, all auxiliary equipment and plants, including substation, water treatment plant, buildings, civil works, cranes and product handling facilities. Construction of the Posco SS-Vina plant is scheduled to be complete by July 2014.



Typical Danarc EAF in operation

Steelmaking

R. Hüsken, J. Cappel

42 Desulphurization strategies in oxygen steelmaking

State-of-the-art desulphurization has to take into consideration actually the sources of sulphur along the iron and steelmaking process chain and the quality requirements of steel products to determine the desulphurization technology.

P. Voss-Spilker

52 High-performance EAF scrap melting technologies

For the conventional EAF state-of-the-art components, design parameters and process measures can combine high performance with low energy consumption. Most of the presented technologies are suited to upgrade or retrofit existing plants.

J. K. Cotchen, R. R. Eggert

54 Automatic gas coupling systems for ladle metallurgy

Bottom stirring plugs require a gas line connection to the ladle. This connection can be made manually or automatically by a variety of different mechanisms. If this connection is made automatically, safety is improved and on the other hand stirring can then be performed in locations that may otherwise not be possible.

26 SMS Siemag Energy and Environmental Technology department to develop green plants

High energy prices are said to also stimulate the demand for ecologically important products. Hence SMS Siemag has yet again reinforced its traditional commitment in this area. As a result, a range of solutions is now available which not only do justice to a distinctive feeling of responsibility for comprehensible environmental protection measures but quite simply help to save money.

Quality assurance

60 Automated quality assurance during continuous casting

Simetal Quality Expert is a new tool for automated quality control. It compares quality-related process parameters with the actual values in production and such analyzes the quality of the products.

62 Laser measuring systems for continuous casting plants

Trimming of slabs and strips, blooms and billets, pipes and sections always generates a certain share of scrap and offcuts that need to be remelted. If the amount of scrap can be reduced, production costs are lowered. Using appropriate measuring and quality assurance systems can significantly help to increase efficiency.

Hot rolling

S. Fernández, D. Sánchez

64 Improving productivity and quality in rolling mills

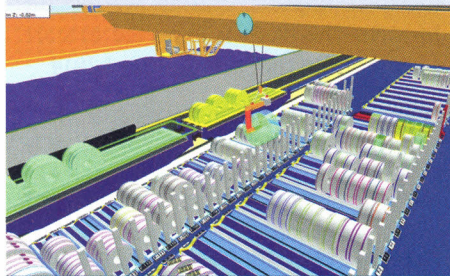
Automation directly impacts on mill productivity and product quality in long product rolling. Understanding the tension-free control methods, shear-cut optimization and optimal cooling systems, will enable productivity and production quality to be improved and metallic losses and downtimes to be reduced.

Material flow logistics

S. Mechmann, T. Tönjes

70 Warehouse management system eliminates bottlenecks

In 2011, Hoesch Hohenlimburg implemented a warehouse management system in the coil store downstream of the two pickling lines. The system optimizes crane movements, avoids unnecessary shifting – and the associated risk of damage – and speeds up loading for shipment. It creates transparency as it makes all information readily available and all activities intuitively comprehensible. Additionally, the system guarantees a high safety level.



The coil store can be visualized from any perspective

78 High-bay warehouse for 45,000 t of coils

1,300 coils will be stored in the new high-bay warehouse of Henan Zhongfu Industrial Co., Ltd., China. A robust storage and transport system will transport up to 350°C hot coils with unit weights of up to 35 t between the hot rolling mill, the annealing furnaces, the cold rolling mills and other production areas.

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