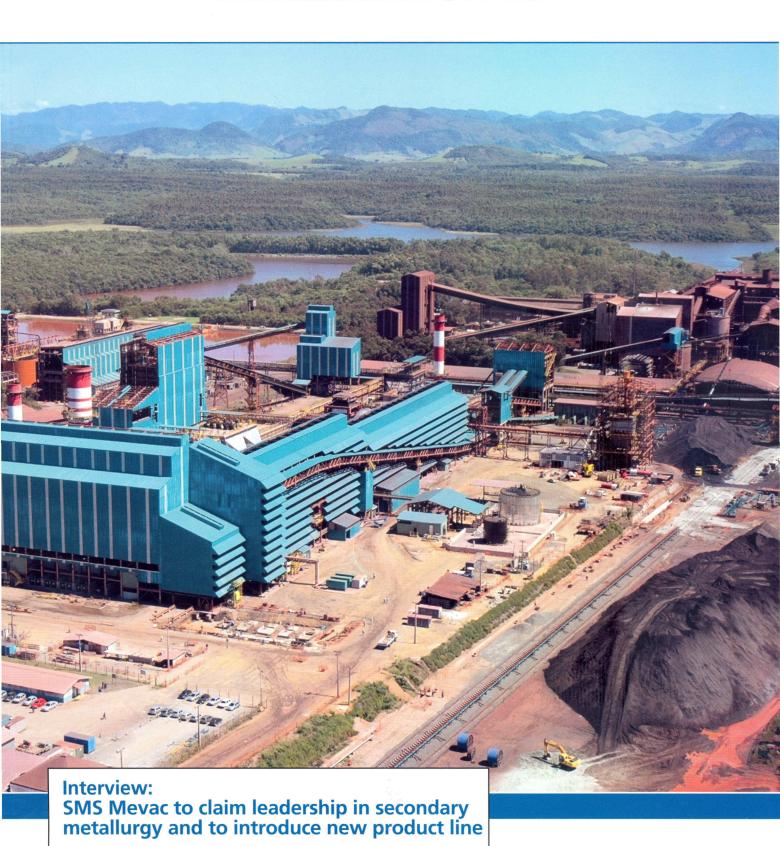
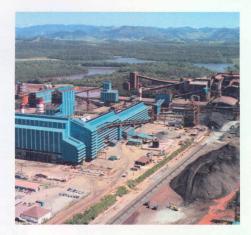
# INTERNATIONAL

September 2011





#### Cover photo:

With Outotec's traveling grate technology, Samarco's indurating furnace in Brazil, the world's largest, produces beyond the design capacity 7.25 million t/year of high-quality iron ore pellets

Contact: www.outotec.com E-mail: info@outotec.com



## **Editorial**

A. Hannewald

1 Innovations in flat production technology

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# **Topical themes**

Interview

26 SMS Mevac to claim leadership in secondary metallurgy technology and to introduce new product line

SMS Mevac is responsible for pretreatment of hot metal as well as for secondary metallurgy within SMS Siemag AG. MPT International talked with Managing Director Michael Thiehofe about the corporate strategy and the recent extension of the technological programme. Michael Thiehofe explains the potentials of the plants and services designed to fully meet the requirements of steel producers worldwide.

# **Company profile**

24 SMS group grasps opportunities of the upswing

Since the markets for metallurgical plant and machinery have picked up, SMS group has enjoyed recovery in order intake. While generating stable profits, the group continues high investments in production facilities and technological innovations.

# **Ironmaking**

30 Reformerless technology marks shift in DR industry

Tenova HYL has been riding a boom in its direct reduction business for five years now totalling 22 million annual tons of new DRI production capacity, with more new projects likely on the way.

## **Steelmaking**

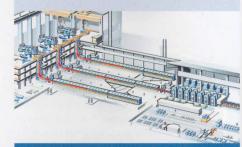
32 Modernization of secondary metallurgy treatment for stainless steel

German stainless steel producer Deutsche Edelstahlwerke is investing some 50 million euros in modifying and modernizing its secondary metallurgy treatment facilities at the site in Witten.

# **Continuous** casting

42 World's first CSP thin slab plant with three strands starts production at Essar Steel

The first strand of the new thin slab casting and rolling plant was put into operation end of March this year. The CSP plant is designed for an annual production of 3.5 million t of hot strip. The product range covers carbon steels as well as pipe grades, silicon and dual-phase steels.



Swivel transfer cars interlink the reheating sections

44 New type of bearings for slab support rolls in continuous casters

A new bearing design was developed for the float positions on slab support rolls in the bender, bow, straightener and horizontal segments of continuous slab casters. Successful trials at lab-scale and in a production caster have confirmed that the bearing meets the design intent and specification.

# **Metallurgical Plant and Technology**

A. Carboni, G. Paulon

# 34 4th generation of thin slab casting technology – present and future

With two new casters at Tangshan Iron & Steel the era of 4th generation thin slab casting has been officially entered. This generation is not only capable of guaranteeing the highest production level but also a variety of high added-value steel grades that until a few years ago could be produced only with traditional thick slab technology.

# Automation – Quality assurance

F. Lücking

#### 46 Implementing a quality execution system for two steel works of Shougang, China

The implementation of the quality execution system at Shougang Corporation required just three months. As a major outcome, every coil at every production step has now a quality certificate, held online on a server for five years. A second outcome is a portable digital quality "manual" describing all key criteria for all products and grades.

V. Schlevoigt

# 52 A new look at edge-trim problems

The Edge Tech inspection system delivers real-time images to monitor trim quality of strips and knife condition at full production speed. The new version of this inspection system was recently introduced after several months of full-production tests in two mills in the United States and scale-size demonstrations at mills in Latin America and Europe.

# Hot rolling – Automation

# 56 Expansion of plate production with a new 5-meter-plate mill at Dongkuk, Korea

Built at the company's Dangjin works, the new mill is capable of producing high-quality plate with thicknesses down to 5 mm for applications in the shipbuilding and construction industries.

## Maintenance

#### 58 Service as a success factor: more than spare parts and repairs

The demand for services is increasing worldwide. This has been triggered by more sophisticated production chains and trends in new materials. SMS Siemag has expanded the service portfolio and the international service network continuously. The article presents a few examples of service.



Training future plant operators in China

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