 Press

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Baosteel Orders Third Continuous Caster from Primetals Technologies in Three-Month Period

* **Primetals Technologies to supply 2-strand continuous slab caster with optimized roll geometry**
* **Will be designed for both conventional and silicon steel production**
* **Third large casting project in three months demonstrates the close and decades-long collaboration between Baosteel and Primetals Technologies**

The world’s largest steel producer, Baosteel, a part of Baowu Group, already operates more than 20 casters supplied by Primetals Technologies. The close collaboration, based on mutual trust, was established in the 1990s. On June 18, 2024, Baosteel signed a contract with Primetals Technologies for the latest continuous casting project, this time for a plant in China’s Shanghai region. It is the third caster order from Baowu Group in three months, a fact that further underscores the strong partnership between the two companies.

The new continuous caster No. 6 will produce both conventional and silicon steel grades for various industries including home appliances and automotive. Primetals Technologies will supply the mechanical equipment and a comprehensive scope of Level 1 and 2 automation systems, and will provide construction and implementation services.

**Next-Level Continuous Caster Design**

A well-balanced combination of sophisticated mechanical design and future-proof automation and digitalization solutions is essential for producing demanding steel grades. Baosteel’s new caster will feature several innovative technologies – this in combination with Primetals Technologies’ established continuous casting expertise and innovation leadership, underscored by a large number of patents, were some of the key factors behind Baosteel’s choice of supplier.

**Highly Innovative Solutions**

Experts from Primetals Technologies will establish the ideal caster roll geometry already at the design stage. This is thanks to a ground-breaking model recently developed by Primetals Technologies, which reduces mold level fluctuations stemming from unsteady bulging by 50 percent, leading to both higher casting speeds and greater productivity.

A comprehensive suite of automation and technology solutions ensures that Baosteel’s new caster will produce slabs with top-level inner quality – an important feature for the manufacture of demanding silicon grades. The Smart Mold, a high-performance cassette-type mold, will be configured with the DynaWidth online mold-width-adjustment system for flexible and fast slab-width changes. Together, these systems make sure that high-quality conditions are met early in the casting process.
An electromagnetic stirrer is a key part of the mechatronics package and allows for enhanced inner-strand quality.

DynaPhase, Dynacs 3D, and DynaGap Soft Reduction 3D are dynamic secondary cooling and soft-reduction packages, which drastically contribute to quality improvements by calculating thermodynamic effects such as conductivity, density, and strand temperature.

**Continuous Improvement of Product Quality**

Several expert systems round off the extensive scope of automation and technology solutions. The computer-aided quality control system Quality Expert tracks, controls, and supervises quality-related data. This technology also makes quality prediction for the cast products, contributing to continuous improvement of product quality. The Nozzle Expert checks the condition of the secondary cooling system online and detects clogged nozzles and leakages with high accuracy.

**A Wide Range of Flat and Wide Products**

Baosteel is a part of the China Baowu Steel Group Corporation, a Fortune Global 500 enterprise. The company operates several plants, including locations in Shanghai, Wuhan, Meishan, and Zhanjiang. Baosteel’s product portfolio encompasses a wide range of flat and long products based on carbon, low-alloyed, alloyed, and silicon steel grades for use in various applications.

**Key facts: Baosteel’s 2-strand continuous caster**

**Capacity:** 2.35 million tons per year

**Radius:** 9.5 meters

**Metallurgical length:** 37 meters

**Dimension of slabs:** 230 x 900 to 1,450 millimeters

**Steel grades**: silicon (NGO, GO), automotive, ultra-low-carbon, low- and medium-carbon, peritectic



Primetals Technologies will supply Baosteel with a 2-strand continuous caster designed for both conventional and silicon steel production.

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