PRIMETALS TECHNOLOGIES

Press

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Primetals Technologies to supply two continuous slab casters to the new HBIS Laoting plant

- **Total annual production capacity of 4.2 million metric tons of slabs**
- **Casters to be part of a new production facility for high-quality steels**
- **LiquiRob casting platform robots to handle potentially hazardous tasks**

Chinese steel producer HBIS Laoting Steel Co. Ltd. has ordered two new, twin-strand continuous slab casters from Primetals Technologies. The casting plants have a combined capacity of 4.2 million metric tons of slabs per annum and will form part of a new production facility for high-quality steels being built in the Laoting district in the south east of the autonomous city of Tangshan. Potentially hazardous tasks will be handled by LiquiRob casting platform robots. The two continuous slab casters are scheduled for commissioning in February and March 2019.

HBIS Laoting was founded in 2017 in order to transfer production capacities out of the core city of Tangshan,.and belongs to HBIS Group Co., Ltd. HBIS Group is one of China's largest iron and steel material manufacturers and comprehensive service suppliers.

The two twin-strand continuous slab casters are each designed for a production capacity of 2.1 million metric tons per annum. They have a machine radius of 9.5 meters and a metallurgical length of 35.1 meters. They cast slabs with a thickness of 230 millimeters in widths ranging from 900 to 1,900 millimeters. The maximum casting speed is 1.8 meters per minute. The range of products covers ultra-low carbon and low carbon steels, deep drawn, structural peritectic alloyed steels, and pipe grades.

Primetals Technologies is responsible for the detail engineering of the casting platform and the strand-guiding system, the basic and detail engineering of the maintenance area, as well as the engineering of the automation and the software for the new continuous slab casters. The scope of supply includes the complete electrical installations and automation, as well as core components, such as molds and mold oscillators, and Smart Benders and Smart Segments for the strand-guide system. Primetals

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Technologies will also supervise the installation and commissioning, and conduct the customer training on site. A LiquiRob system will manipulate the hydraulic cylinder of the ladle slide gate and the media connection in the ladle area. Another LiquiRob system on the ladle caster platform will manipulate the ladle shrouds, measure the temperatures, and control the firing of the ladles.

Both casting plants will be equipped with a straight cassette-type Smart Mold with LevCon mold level control, Mold Expert for the automatic breakout detection system and process data monitoring, DynaWidth for changing the width of the slab during operation, a DynaFlex mold oscillator and an electromagnetic mold stirrer. I-Star rollers will be used to support the strand in the segments of the strand-guide system. The DynaPhase and Dynacs 3D process models will be used for the dynamic control of the strand temperature. They calculate and dynamically control a three-dimensional temperature profile along the whole length of the strand. This enables the working points of the strand cooling, and thus the final strand solidification, to be determined precisely as a function of the casting speed, slab format and steel grade. DynaGap Soft Reduction 3D will be used to improve the interior quality of the slabs. The roller gap is dynamically adjusted during the final solidification in line with the working points calculated by Dynacs 3D. The center and edges are cooled in the bending section and segments to allow uniform, optimal cooling over the entire width of the slabs.

Twin-strand continuous slab caster from Primetals Technologies

This press release and a press photo are available at

www.primetals.com/press/

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Primetals Technologies, Limited headquartered in London, United Kingdom is a worldwide leading engineering, plant-building and lifecycle services partner for the metals industry. The company offers a complete technology, product and service portfolio that includes integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain, extending from the raw materials to the finished product – in addition to the latest rolling solutions for the nonferrous metals sector. Primetals Technologies is a joint venture of Mitsubishi Heavy Industries (MHI) and Siemens. Mitsubishi-Hitachi Metals Machinery (MHMM) - an MHI consolidated group company with equity participation by Hitachi, Ltd. and the IHI Corporation - holds a 51% stake and Siemens a 49% stake in the joint venture. The company employs around 7,000 employees worldwide. Further information is available on the Internet at www.primetals.com.