
London, May 15, 2018

Primetals Technologies receives FAC for two continuous slab casters from Shandong Iron & Steel

- **Both plants were commissioned within just two days**
- **“Connect & Cast” principle speeded up commissioning**
- **Fully automated operation with all Level 2 systems was immediately possible**
- **Total capacity is 4.6 million metric tons of slabs per annum**
- **Technology packages ensure high quality slabs and flexibility even under fluctuating casting conditions**

In April, Primetals Technologies received the Final Acceptance Certificates (FAC) for two two-strand continuous slab casters from Chinese steel producer, Shandong Iron & Steel Group Rizhao Co. Ltd. The casters were hot commissioned within two days in December 2017. Installation of the equipment and technology packages was based on the Primetals Technologies “Connect&Cast” principle. This ensured that all functions and systems of the plant – including mold level control with automatic casting start and the level 2 systems – were ready from the very first charge of the fully automated operation, and even during the run-up phase in the first week of operation over 40,000 metric tons of slabs were produced for commercial use. The casting plants were installed in a new production plant for high-quality steel in the Rizhao coastal region of Shandong Province. They are designed to produce 4.6 million metric tons of slabs per annum. A number of technology packages ensure high surface and interior quality, even under fluctuating production conditions, and facilitate a flexible casting operation.

The steel for the two continuous casting plants is produced in basic oxygen steel converters with a total capacity of five million metric tons per annum. The casting plants are equipped with LevCon mold level control, straight, cassette-type Smart Molds, DynaWidth for automatically adjusting the width of the slabs, and hydraulic DynaFlex mold oscillators. Smart Segments, I-Star Rollers and DynaJet spray nozzles are installed in the strand-guide system. DynaGap Soft Reduction ensures that the slabs have a high interior quality. The secondary cooling system uses Dynacs 3D with eleven spray cooling zones. The CC Control package handles the basic automation, and CC Optimization the process automation.

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The two continuous casting plants have a machine radius of 9.5 meters and metallurgical length of around 32 meters. They produce slabs with a thickness of 230 millimeters in widths ranging from 1,000 to 1,950 millimeters. The casting speed ranges up to 1.7 meters per minute. The plants process a wide range of carbon steels, peritectic grades, structural steel, HSLA (high strength low alloy) steels, deep-drawn grades, and various alloys for pipes.

Primetals Technologies was responsible for the detailed engineering of the casting platform and strand-guide system, the basic engineering of the caster runout and discharge and the basic and detailed engineering for the maintenance area as well as for configuring the automation and the associated software. Primetals Technologies also supplied core components, hydraulic cylinders, drives, spray nozzles, and electrical and automation equipment. The scope of services also included supervision of installation and commissioning work as well as customer training.

Connect & Cast is a registered trademark of Primetals Technologies in some countries.



Two-strand continuous slab caster from Primetals Technologies at the Chinese steel producer, Shandong Iron & Steel Group Rizhao Co. Ltd.

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.