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Continuous slab caster from Primetals Technologies goes on stream at CSP in Brazil

- **Annual slab production capacity of three million metric tons**

A two-strand continuous slab caster supplied by Primetals Technologies has gone on stream at Companhia Siderúrgica do Pecém (CSP), a Brazilian steel producer. The plant has a capacity of three million metric tons of slabs per annum. The continuous slab caster is part of a new steel works in the Pecém Industrial and Port Complex in São Gonçalo do Amarante in the state of Ceará. Primetals Technologies received the order in 2012 from Posco E&C, a company based in South Korea.

The continuous slab caster has a machine radius of 9.5 meters and a metallurgical length of 39.8 meters. It produces slabs in thicknesses of 220, 250 and 300 millimeters, and in widths ranging from 1,100 to 2,300 millimeters. A wide range of steel grades are cast, from low-carbon structural steels to peritectic and micro-alloyed medium and high-carbon steels, such as ULC, LC, MC, HSLA and HC. The slabs are then rolled into plate and sheet metal for use in mechanical engineering, shipbuilding, boiler and pipeline construction. The maximum casting speed is 1.8 meters per minute. Primetals Technologies engineered the entire plant and supplied core components, the fluid systems, the basic and process automation, and technology packages. The project also included training the operator's personnel, and supervising the construction and commissioning work.

The scope of supply from Primetals Technologies included straight Smart Mold molds plus the DynaWidth technology package for dynamic width adjustment during casting. LevCon mold level control and an electromagnetic, multi-mode mold-stirring system were installed to ensure an optimum bath level in the mold. The DynaFlex mold oscillation provides flexible adaptation of the oscillation parameters. The caster's strand-guide system has a remotely adjustable Smart Bender and Smart Segments which, together with DynaGap Soft Reduction 3D, means that slab thickness can be changed quickly and automatically. I-Star strand-guide rollers support the strand.

The Dynacs 3D secondary cooling process model dynamically calculates a three-dimensional temperature profile along the whole length of the strand. This helps to determine precisely the working points of the secondary cooling and the final strand solidification in response to the casting speed, slab format and steel grade. The internal quality of the slabs is improved by using DynaGap Soft Reduction 3D. The roller gap is dynamically adjusted during final solidification based on the working points calculated by Dynacs 3D. DynaJet spray cooling with movable nozzles in the segments ensures uniform, optimum cooling of the slabs, and consequently a high quality surface.



Two-strand continuous slab caster from Primetals Technologies in the Brazilian steel works of Companhia Siderúrgica do Pecém (CSP). The caster is part of a new plant in the Pecém Industrial and Port Complex in São Gonçalo do Amarante in the state of Ceará.

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.