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Primetals Technologies pleased to announce 150th order in the last ten years for continuous caster process optimization

- **Advanced automation packages and cyber-physical models are in demand**
- **Obtaining metallurgic and digitalization know-how from a single source saves time and money**
- **High demand from the USA and China is boosting business**
- **Rising number of installations on third-party plants**
- **Steel producers showing increasing interest in "digital twin"**

One of China's largest steel producers recently awarded Primetals Technologies an order to optimize the processes of one of its continuous casters. This meant that the leading supplier of automation systems in the metallurgical industry celebrated its 150th order in the last ten years alone for process automation systems (Level 2) in continuous casting. Advanced automation packages and cyber-physical models are in especially high demand. Continuous caster operators save time and money by obtaining metallurgic and digitalization know-how from a single source. A major driver in this business is the high demand in the USA and China. Solutions from Primetals Technologies for the automation and digitalization of continuous casters are increasingly being installed on third-party plants. Steel producers are showing growing interest in "digital twins".

Advanced automation packages and cyber-physical models

Steel producers want to cast many grades of steel, slab thicknesses and widths on a continuous caster that produces at a high level of productivity and consistently high quality without stopping. Nowadays, advanced automation packages and cyber-physical models ("digital twins") with a high degree of digitalization are "state-of-the-art" and form the basis for the ongoing optimization of production processes. As Dr. Peter Juza, head of the Electrical & Automation division in Linz, explained: "In keeping with these demands, we have been continually developing our solutions in recent years, and can now

offer our customers the most comprehensive portfolio for the automation, digitalization and optimization of continuous casters. The number of orders in this sector more than doubled during the last fiscal year.”

Metallurgic and digitalization know-how

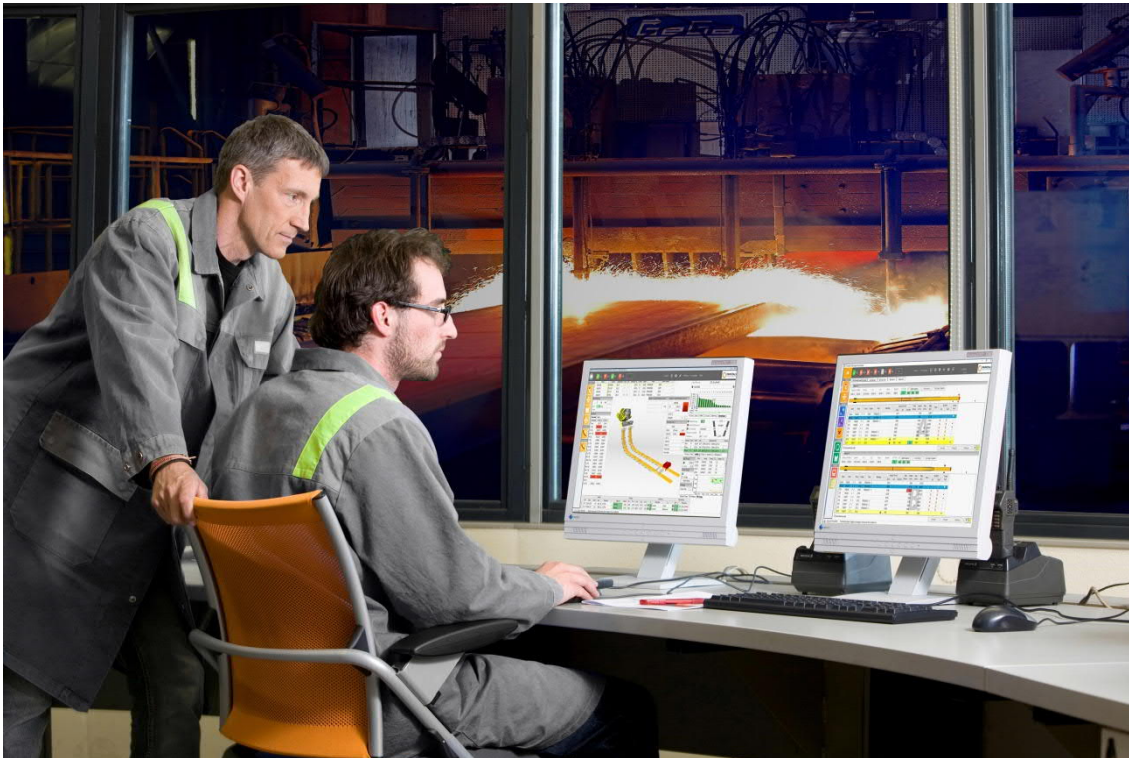
Juza continued: "Primetals Technologies combines many years of experience in the digitalization of steel production processes with profound metallurgic know-how – which is a great advantage for our customers." One example of this is the "Model Suite", which contains the DynaPhase, Dynacs 3D and DynaGap Soft Reduction 3D solutions. This suite of modeling packages is based on state-of-the-art technology for dynamic secondary cooling and soft reduction. It takes into account thermodynamic effects, such as shrinkage and phase transitions, thus making a significant contribution toward directly improving quality during the solidification phase. Plant operators can have a digital twin of their continuous caster and the continuous casting process. This enables them to optimize production processes and the production of new grades of steel in the simulation and replay mode. This "Process Intelligent Cockpit" process can also be used for training continuous caster operators.

Business drivers: the USA, China and installations on third-party plants

The large, long-standing customer base is one of the reasons for the large number of orders for optimizing continuous caster processes. Many steel producers want to benefit from the ongoing further development of software solutions from Primetals Technologies and therefore update their systems regularly. Lively investment in the USA and China is a further factor behind the booming business. Furthermore, in the last fiscal year, the number of orders for installations in third-party plants increased substantially throughout the world.

Subscription licenses for process optimizing systems

Juza said with pride: "Our offer of a subscription license for a system for optimizing continuous casting processes is arousing great interest in the world's steel industry." With this model, new releases, upgrades and updates are installed after consultation with the customer. This keeps the customer's application up to date and allows operators to benefit from ongoing developments, improvements and inventions. The modularity of the system allows subscriptions to individual functions and models to be taken out or canceled as required. Newly developed features and functions that become available over the course of time can also be implemented on request. The service package included in the scope of delivery offers remote support for troubleshooting, consultations, training, fine tuning and optimization. In December 2018, a US-based steel producer was the first company in the world to purchase a subscription license from Primetals Technologies for its continuous caster. Juza added: "The increasing number of customer inquiries convinces us that we have the right model for the future."



The digital twin from Primetals Technologies for optimizing processes for continuous casters in steel works is based on many years of experience and hundreds of completed projects.

This press release and a press photo are available at www.primetals.com/press/

Contact for journalists:

Dr. Rainer Schulze: rainer.schulze@primetals.com

Tel: +49 9131 9886-417

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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.