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London, June 22, 2017

## Primetals Technologies to supply Industry 4.0 package for Baosteel hot strip mill

- **New technology package “Dynamic Width Control” will be installed at Baosteel’s HSM 1580 as part of an “Intelligent Workshop” pilot project**
- **Aim is to improve width performance of hot strip mill**
- **Optimized width control will reduce waste material**

Recently, Primetals Technologies signed a contract with Baoshan Iron & Steel Group Co. Ltd (Baosteel) for the supply of the technology package “Dynamic Width Control”. The package will be installed on the company’s hot strip mill HSM 1580 in Shanghai, China as part of Baosteel’s “Intelligent Workshop” pilot project. The aim is to improve the width performance of HSM 1580 and thus reduce the amount of waste material. The new package will be commissioned and tuned during regular production until the end of 2017. No additional shutdowns will be required.

The reduction of width deviations and elimination of under width is a challenge for hot mill production. Improvements are required to reduce the over width that is necessary to ensure the final width after trimming of the hot rolled band. Hence, it influences the amount of waste material and therefore has a big commercial impact on the production of hot band.

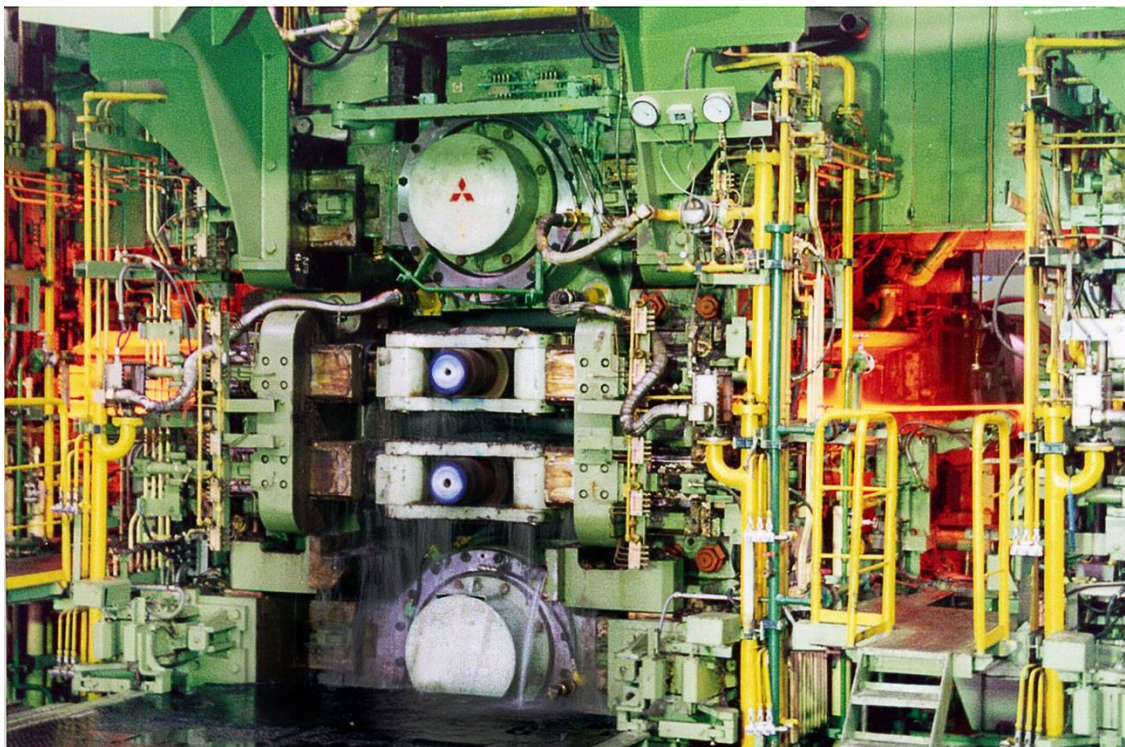
The width is typically controlled by vertical stands in the roughing mill (edger) and the relation of tensions and reductions in the finishing mill. For the latter part, the new technology package Dynamic Width Control for finishing mills manipulates the width by tension control in the finishing mill. Width deviations are measured before and after the finishing mill. The entry width deviation is compensated by a feed-forward width control. The residual exit width deviation is compensated by a feedback width control. Moreover, the model based feed-forward width control considers effects of width spread in roll bite and the creep deformation between the stands. To improve the existing roughing mill setup, a precise target width for the transfer bar is provided by a new finishing mill width change prediction function, based on machine learning.

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Baoshan Iron and Steel Co Ltd is part of the newly formed China Baowu Steel Group Corp Ltd, with an annual production of approximately 60 million metric tons the second largest steel producer in the world. Baosteel's HSM 1580 has been selected as a "Intelligent Workshop" pilot project in the "China Manufacturing 2025" Government Program,. The new Dynamic Width Control technology package – a Cyber-Physical System (CPS) – is part of the Industry 4.0 portfolio of Primetals Technologies.



Hot strip mill HSM 1580 of Baoshan Iron & Steel Group Co. Ltd (Baosteel) in Shanghai, China. Primetals Technologies will equip the mill with the technology package "Dynamic Width Control". The aim is to improve the width performance of HSM 1580 and thus reduce the amount of waste material.

This press release and a press photo are available at

[www.primetals.com/press/](http://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](http://www.primetals.com).