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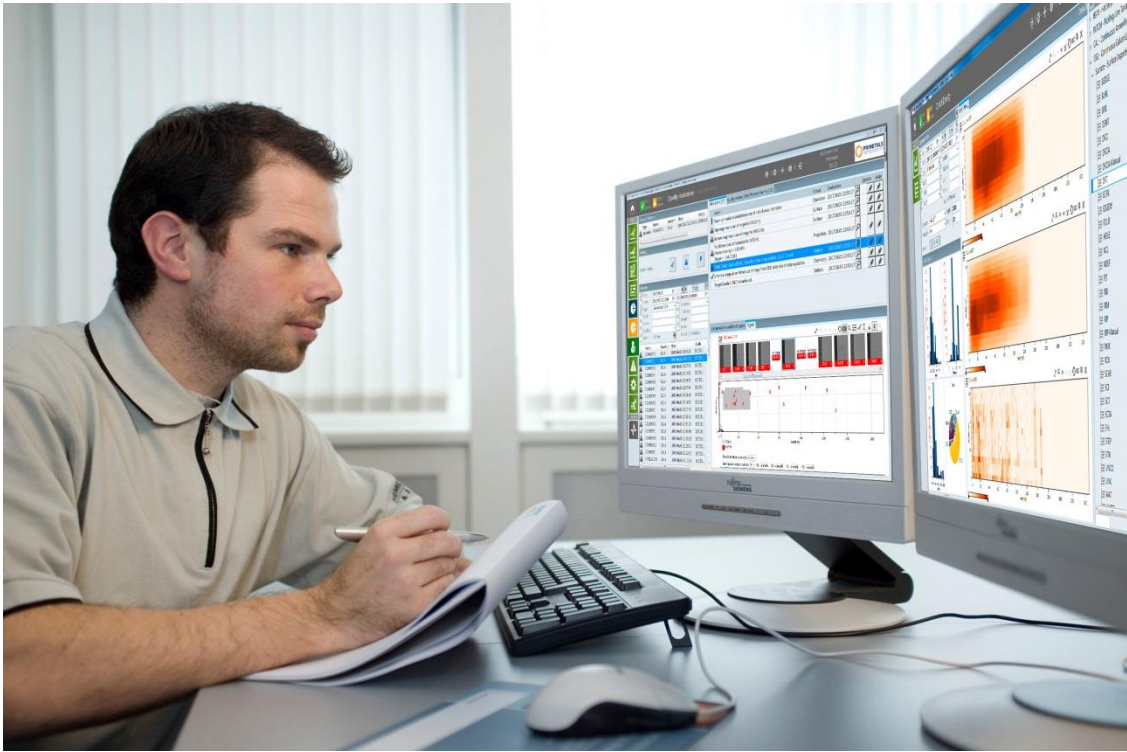
## Rizhao orders Through-Process Optimization solution for entire production route from Primetals Technologies

- **Solution monitors and manages product quality along the entire production route**
- **Intelligent IT solution combined with expert know-how supports high end steel production**

Chinese steel producer Rizhao Steel Group Co., Ltd (Rizhao) awarded Primetals Technologies with an order for implementing the newly developed Through-Process Optimization solution (TPO). The order comprises of the intelligent Through-Process Quality Control System (TPQC), a newly developed Industry 4.0 IT system and Through-Process Know-How (TPKH) modules. The TPO system to be installed at Rizhao's production complex in Shandong Province will continuously monitor and manage product quality by recording all process parameters as well as measured production and product data, starting from the liquid phase up to the final processing lines.

Quality conformance checks along the production route are carried out by a freely editable rule-system supported by the know-how of Primetals Technologies experts for each process unit. After implementation, this single IT system will execute route cause analysis and will propose corrective and compensational actions in case of quality deviations. Additionally, TPQC offers a wide range of tools like Statistical Process Control (SPC), Key Performance Indicators (KPI) and rule based product grading, to monitor and optimize the entire production process. The possibility for exporting large data amounts from the long term data archive support engineers in understanding and remedy complex technical problems by data analytics. By this, the development time for new products will be significantly decreased.

Through-Process Optimization is an integrated know-how based solution developed by Primetals Technologies to improve efficiency, stability and product quality across the entire steel production route. Additionally, the know-how based TPQC IT system accelerates the time to market for cutting edge high value products.



Through-Process Optimization (TPO) from Primetals Technologies. The TPO system to be installed at Rizhao's production complex in Shandong Province will continuously monitor and manage product quality by recording all process parameters as well as measured production and product data,

This press release and a press photo are available at

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

#### **Contact for journalists:**

Dr. Rainer Schulze: [rainer.schulze@primetals.com](mailto:rainer.schulze@primetals.com)

Tel: +49 9131 9886-417

Follow us on Twitter: [twitter.com/primetals](https://twitter.com/primetals)

**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).

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**Primetals Technologies, Limited**  
A joint venture of Siemens, Mitsubishi Heavy Industries and Partners  
Communications  
Head: Gerlinde Djumlija

Chiswick Park, Building 11, 566 Chiswick High Road  
W4 5YS London  
United Kingdom