

Press

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Rizhao produces the first coil on Arvedi ESP plant from **Primetals Technologies**

- First coil rolled within 20 months of receipt of order
- Plant produces hot strip in thicknesses down to 0.8 millimeters
- The production capacity is 2.55 million metric tons per annum
- The Arvedi ESP process reduces energy consumption by up to 45 percent

In February, the Chinese steel producer, Rizhao Steel Group Co., Ltd (Rizhao), rolled the first coil on the Arvedi ESP (Endless Strip Production) plant no. 1 supplied by Primetals Technologies. Earlier this year, the first casting as well as the rolling of the first plates were carried out successfully. The plant is designed for an annual production of 2.55 million metric tons of high quality, ultra-thin hot strip, in widths up to 1,600 millimeters and thickness down to 0.8 millimeters. The energy consumption is up to 45 percent lower than in a conventional casting and rolling process. The Arvedi ESP plants have put Rizhao in a position to open up the attractive domestic and foreign markets for high quality, thin-gauge products.

The plant is one of five casting-rolling plants, which Rizhao ordered from Primetals Technologies in 2013 and 2014. While plant no. 1 is being commissioned, plant no. 2 is already under construction, and work started on plant no. 3 in December 2014. The delivery of equipment has also begun. The project development for plant nos. 4 and 5 in the second plant complex is also on schedule.

Primetals Technologies was responsible for the engineering of the Arvedi ESP plant and supplied the mechanical equipment, media systems, technology packages and automation. The entire line is controlled by integrated basic (level 1) and process automation (level 2). This ensures a finely tuned interaction between the casting and rolling processes. The project also includes a comprehensive

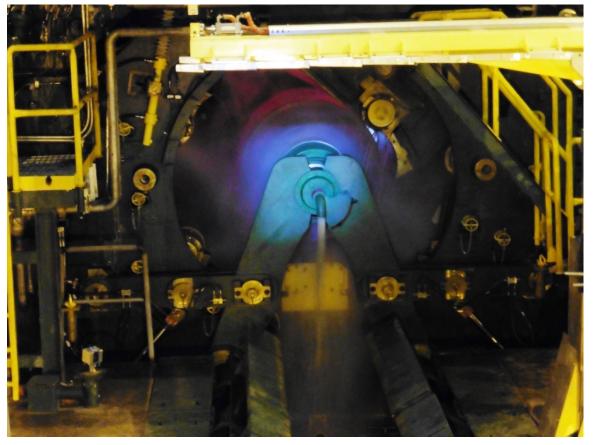
Primetals Technologies, Limited A joint venture of Siemens, Mitsubishi Heavy Industries and Partners Communications and Marketing

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training and support package. This covers the theoretical and practical instruction of the customer's personnel on the ESP plant belonging to Acciaieria Arvedi SpA in Cremona, Italy.

The Arvedi ESP process produces hot strip in a combined, continuous and uninterrupted casting and rolling process. In this type of plant, the energy consumption and the associated costs are up to 45 percent lower than those of conventional casting and rolling processes. This also means a significant reduction of CO₂ emissions. With a length of just 180 meters, the plants also have considerably more compact dimensions than conventional casting and rolling mills.



Arvedi ESP plant no. 1 at Rizhao Steel Group Co., Ltd in Rizhao, China. In February, the plant supplied by Primetals Technologies produced the first coil.

This press release and a **press picture** is available at www.primetals.com/press/

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Primetals Technologies, Limited, headquartered in Frimley, Camberley, United Kingdom, is a worldwide leading engineering, plant-building and lifecycle partner for the metals industry. The company offers a complete technology, product and service portfolio that includes the integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain that extends 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 IHI Corporation - holds a 51% stake and Siemens a 49% stake in the company. The company employs around 9,000 employees worldwide. Further information is available on the Internet at www.primetals.com.

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