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Extensive plate mill automation upgrade enables Chinese steel producer to improve product quality

- **Implementation of comprehensive automation solution at plate mill in China**
- **New Level 2 automation system improves end-product quality and stabilizes the production process**
- **FAC received two weeks ahead of schedule**

A few years ago, Chinese steel producer Xiangtan Iron and Steel started looking at solutions to improve its product quality. At the same time, the company wanted to modernize obsolete automation systems. Primetals Technologies presented a solution capable of addressing both of these issues and was, as a result, awarded a contract for an extensive automation upgrade of Xiangtan's plate mill located in Xiangtan, Hunan province.

Exceeding expectations

Recently, Primetals Technologies received the final acceptance certificate, two weeks ahead of schedule. The implementation phase lasted only six weeks, and the quality of the products exceeded the expectations of the customer almost immediately after the start of production. "The open communication between Primetals Technologies and our technical staff was efficient, allowing the project to run smoothly and to be completed ahead of schedule. It clearly demonstrates Primetals Technologies' technological and organizational strengths," says Li YuXiang, Vice Chief Engineer of Electrical Automation at the Xiangtan plate mill.

Benefits with upgraded Level 2 automation system

Primetals Technologies' upgrade of the process optimization system ensures that the predictions of roll force and roll torque – both of which are key parameters during the rolling process – are improved. In addition, the complete rolling process is stabilized, in particular when rolling small lots and different steel grades. A part of the Level 2 system, Set Point Monitor makes the rolling process more flexible by synchronizing the Level 1 and 2 automation systems, for instance, after parameter adaptations, interventions by operators, or after any unplanned events.

Another module of the Level 2 system, Path Keeper, locks the desired thickness at a predetermined part of the rolling process and onwards until the plate leaves the mill. Thanks to this module, the process automation system is protected against noisy data, i.e. data that might result in false conclusions.

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Additionally, Path Keeper ensures stable calculations of the pass schedule, which is particularly helpful when rolling thin gauges.

A wide array of markets

Founded in 1958, Xiangtan Iron and Steel employs some 10,400 people. Annual production capacity is at 12 million tons of steel in the form of wide and heavy plates, wire rods, and bars. The steel producer serves several markets, including shipbuilding, construction machinery, marine engineering, bridge construction, and pressure vessels. Steel products from Xiangtan have been used for the Hong Kong-Zhuhai-Macao bridge, the world's longest cross-sea bridge, and Abu Dhabi International Airport.



Primetals Technologies' upgrade of the Level 2 automation system at Xiangtan Iron and Steel's plate mill has resulted in improved quality of the produced plates.



“The open communication between Primetals Technologies and our technical staff was efficient,” said Xiangtan representatives after the conclusion of the project.

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

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