

London, February 01, 2023

Primetals Technologies' largest automation upgrade to date implemented at Taiyuan Group in China

- **Process optimization upgrade for the entire meltshop and casting areas including two LD converters (BOFs), two electric arc furnaces, three AOD converters, and seven slab casters**
- **Central control station ensures "one-button steelmaking"**
- **System changes completed within one week**

Primetals Technologies' most extensive upgrade of process optimization systems to date was recently implemented at Taiyuan Iron and Steel Group Co's (TISCO) steel plant in Taiyuan, Shanxi Province, China. Switching to the new systems took just one week and was accomplished remotely, marking project completion two months ahead of schedule.

Fully automated plant

Primetals Technologies upgraded the Level 2 automation systems at 14 steelmaking units across the entire meltshop, seven continuous slab casters, and the central management system for raw-material logistics and evaluation. This comprehensive modernization enables TISCO to execute the steel-production process from a central control center, also sometimes called "integrated control center" (ICC). The upgrade ensures full plant automation, "one-button steelmaking", as all systems are connected to the same unified network.

Improved performance

The modernization of the Level 2 systems makes it possible for TISCO to calculate process parameters even more accurately using modern metallurgical models, which will improve the quality, productivity, and flexibility of TISCO's production process.

The software system features a significantly improved user interface – the new version is easier to navigate and more intuitive for operators. In addition, the new interface simplifies the communication between the systems as well as the future implementation of extensions. The servers are virtualized, meaning that the process optimization solutions are operated without hardware, which in turn reduces the need for IT-related maintenance.

Wide-ranging upgrade

TISCO's Taiyuan site is one of the world's largest steel plants. Primetals Technologies has upgraded the process optimization software on 20 units in total: two electric arc furnaces, three AOD converters, one

twin VOD plant, three twin ladle furnaces, two LD converters (BOF) including a ladle stirring station, two twin-RH vacuum degassing systems, and seven continuous slab casters.

Developing special steels

Founded in 1934, TISCO is a holding subsidiary of China Baowu Iron and Steel Group. The company has long focused on the development of special steels such as ultra-wide, ultra-thick and ultra-thin strip tubes, spring steel, hand tear steel, core steel, railway steel, duplex stainless steel, and high-quality silicon steel for electric vehicles.



Primetals Technologies has implemented its largest ever upgrade of process optimization systems in a single steel plant at TISCO's Taiyuan site in China. Copyright: TISCO.

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material to finished product – as well as state-of-the-art rolling mill solutions for non-ferrous metals. Primetals Technologies is a joint venture between Mitsubishi Heavy Industries and partners and employs approximately 7,000 people worldwide. To learn more about Primetals Technologies, please visit the company's website at www.primetals.com.