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Outstanding performance figures from EAF Quantum recently implemented by Primetals Technologies

- **Primetals Technologies receives final acceptance certificate (FAC) for Electric Arc Furnace Quantum**
- **Innovative technology and low power-on times are resulting in excellent productivity figures**

Primetals Technologies has recently received the final acceptance certificate (FAC) for an EAF Quantum implemented at Chinese steel producer Hongtai Steel's site close to Xuancheng, Anhui province, China.

In 2018, Primetals Technologies was awarded the contract, which includes a 120-ton EAF Quantum, a 120-ton twin ladle furnace, as well as Level 1 and 2 automation systems for both the EAF and the twin ladle furnace. Basic engineering and supply of key equipment for the dedusting system were also included in the order.

Record-breaking performance

The electric steelmaking plant produced its first heat early in 2022. Since then, it has achieved heats with record-breaking figures on a consistent basis. As an example, the power consumption was below 300 kilowatt-hours per ton at a power-on time of about 30 minutes. At the same time, the oxygen consumption was minimal, at less than 23 cubic meters per ton. The performance of the EAF Quantum has resulted in productivity figures exceeding the expectations of Hongtai Steel.

Innovative scrap preheating system

The excellent performance figures are made possible by several special features of the EAF Quantum. As an example, it uses a scrap preheating system that shortens the power-on times. In a conventional electric arc furnace, the scrap is cold when charged. With the EAF Quantum, scrap is preheated with off-gas from the production process. Therefore, less energy is needed to melt the scrap, which results in lower operating costs and reduced CO2 emissions.

Primetals Technologies has five patents for the highly innovative EAF Quantum technology – among them the shaft design and the automatic tap-hole sand-filling system. Furthermore, this furnace is fully automated and features advanced dust removal systems. As a result, the dust emission is reduced by 50 percent compared with standard electric arc furnaces.

Founded in 2002, Langxi County Hongtai Steel manufactures a wide array of steel-production components including bushings and rolling mill rolls, and also produces construction steel, for example rebar, coiled rebar, wire rod, and more. The Anhui province is located in the eastern part of China.



Hongtai Steel's EAF Quantum from Primetals Technologies.

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

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Primetals Technologies, Limited, headquartered in London, United Kingdom, is a pioneer and world leader in the fields of engineering, plant building, and the provision of lifecycle services for the metals industry. The company offers a complete technology, product, and services portfolio that includes integrated electrics and automation, digitalization, and environmental solutions. This covers every step of the iron and steel production chain—from the raw materials to the finished product—and includes the latest rolling solutions for the nonferrous metals sector. Primetals Technologies is a joint venture of Mitsubishi Heavy Industries and partners, with around 7,000 employees worldwide. To learn more about Primetals Technologies, visit the company website www.primetals.com.