PRIMETALS TECHNOLOGIES

Press

London, April 25, 2023

Remarkable performance figures from Primetals Technologies' electric steelmaking plants in China

- **Performance figures of EAF Quantum plants in China are exceeding the customer's expectations**
- **Tap-to-tap times of 31 minutes at power-off times of four minutes**
- **Ten Chinese steel producers have implemented EAF Quantum furnaces to date**

In 2018, Guilin Pinggang became the first Chinese steel producer to order an EAF Quantum electric arc furnace from Primetals Technologies. Soon thereafter, steel producer Wuzhou Yongda placed another Chinese EAF Quantum order. Five years later, there are now ten electric steelmaking plants of this type in operation in China, and more plants will follow soon.

Together with Primetals Technologies, Guilin Pinggang and Wuzhou Yongda now reveal the outstanding performance figures for these two electric steelmaking plants. Both EAFs regularly achieve a power consumption below 300 kilowatt-hours per ton at power-on times of less than 29 minutes.

"Guilin Pinggang is proud to have been the first Chinese steel producer to select an EAF Quantum based minimill in 2018. Since the start-up of the EAF Quantum at the end of 2020, its performance keeps improving, and it exceeds our expectations," says Guilin Pinggang chairman Wang Jiakai.

"World-class performance"

The EAF Quantum at the Pinggang plant has achieved tap-to-tap times of 31 minutes at power-off times of four minutes, while the EAF Quantum at Wuzhou Yongda has clocked in at tap-to-tap times of 32 minutes with power-off times of four minutes.

"Wuzhou Yongda decided to build an EAF Quantum based production line from Primetals Technologies in 2018, and it started up at the end of 2020. Our EAF Quantum reaches world-class performance while at the same time being energy-saving and environmentally friendly. Energy consumption is reduced by more than 20 percent, while particulate emissions are at less than 30 percent compared to the technology we had before," says Jin Yingchun, General Manager at Wuzhou Yongda.

Primetals Technologies, Limited
A Mitsubishi Heavy Industries Group Company
Communications

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

Technical innovations

The EAF Quantum features several technological innovations that make the remarkable performance figures possible. Thanks to the scrap preheating system, the power-on times are shortened compared with a conventional electric arc furnace, in which the scrap is cold when charged. In an EAF Quantum, scrap is fully preheated using off-gas from the production process. In that way, less energy is needed to melt the scrap, and therefore, the EAF Quantum has lower operating costs and reduced CO_2 emissions.

Primetals Technologies has developed the EAF Quantum and holds several patents for the technology. Two of these patents cover the shaft design and the automatic tap-hole sand-filling system.

Key Facts: EAF Quantum plants in China

The most important performance figures for the EAF Quantum furnaces at Guilin Pinggang and Wuzhou Yongda:

Yield

More than 94 percent

Electrode consumption

Less than 0.7 kilograms per ton (2022)

Oxygen consumption

Close to 20 cubic meters per ton

Tap-to tap time

Less than 32 minutes

Power-off time

Less than four minutes

Running lifetime of lower shell

More than 1200 heats

Auxiliary energy consumption

Less than 23 kilowatt-hours per ton

The Wuzhou Yongda EAF Quantum from Primetals Technologies has impressed the Chinese steel producer with strong performance figures.

Guilin Pinggang ordered its EAF Quantum from Primetals Technologies in 2018.

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

Contact for journalists:
Björn Westin, Press Officer
bjoern.westin@primetals.com
Mob. +43 664 6150250

Follow us on social media:
linkedin.com/company/primetals
facebook.com/primetals
twitter.com/primetals

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 Mitsubishi Heavy Industries Group Company, with around 7,000 employees worldwide. To learn more about Primetals Technologies, visit the company website www.primetals.com.