

London, August 31, 2022

## Primetals Technologies and POSCO to develop new green steel demonstration plant

- **HyREX – a new technology for hydrogen-based hot metal production**
- **Primetals Technologies and POSCO have agreed to jointly develop a new green steel demonstration plant**
- **The plant has a key role for POSCO as the steel producer aims to achieve carbon neutrality by 2050**

On July 26th, Primetals Technologies and South Korean leading steel producer POSCO signed a Memorandum of Understanding (MOU) to develop a demonstration plant for hydrogen-based hot metal production in South Korea. Startup of the plant is scheduled for early 2027.

“For the development of eco-friendly hydrogen-based hot metal production, collaboration across all sectors such as raw materials, engineering, and hydrogen is essential. Thanks to the collaboration between POSCO and Primetals Technologies, we will make use of leading technological knowledge during development and implementation,” said Dr. Kisoo Kim, Head of Low Carbon Process R&D at POSCO.

### **A competitive green steel solution**

With the HyREX technology, POSCO will produce direct reduced iron (DRI) by using hydrogen as reducing gas. The produced DRI will afterwards be melted in an electric smelting furnace (Smelter). The HyREX solution is directly using sinter fines and is, in that way, avoiding any agglomeration steps – like sintering or pelletizing – in advance. Therefore, it is highly cost competitive.

### **Carbon neutrality**

POSCO is on a mission to achieve carbon neutrality by 2050, and on that journey HyREX will be of great importance. POSCO aims to continue evaluating the commercial feasibility of hydrogen-based hot metal production until 2030. Two important steps during this phase are to develop and construct the HyREX demonstration plant. POSCO’s long-term goal is to gradually replace its current blast furnaces with HyREX plants.

## Successful collaboration

Primetals Technologies and POSCO have a history of successful collaboration. In 2007, POSCO was the first steel producer to successfully operate a commercial FINEX plant. Developed by Primetals Technologies and POSCO, FINEX is an innovative ironmaking process based on the direct use of fine ore and non-coking coal.

“We expect the HyREX technology to be a long-term and fundamental solution in many regions where it is difficult to use pellets. Let’s create a new success story together,” said Aashish Gupta, Executive Vice President at Primetals Technologies.



Representatives from POSCO (in blue) and Primetals Technologies, from left to right: Jaehoon Park, Head of Electric Melting & Steelmaking Research Group, Jinchan Bae, Head of Iron and Steelmaking Production Technology Group, Dr. Myung Gyun Shin, Head of Hydrogen Ironmaking Research Group, Dr. Kiso Kim, Head of Low Carbon Process R&D Center, Dr. Friedemann Plaul, Head of Iron- and steelmaking, Aashish Gupta, Executive Vice President, and Sukju Lee, CEO at Primetals Technologies South Korea.

This **press release** and a **press picture** are available at [www.primetals.com/press/](http://www.primetals.com/press/)

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