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## Blastr Green Steel Chooses Primetals Technologies as Technological Partner for Low-Carbon-Emissions Plant

- **Blastr Green Steel set to become leading producer of green steel with annual capacity of 2.5 million tons**
- **Primetals Technologies selected as technological partner for DRI plant, electric steelmaking meltshop, Arvedi ESP line, and continuous pickling and galvanizing line**
- **DRI plant to be provided via collaboration between Midrex Technologies and Primetals Technologies**
- **Innovative digital and AI-based solutions from Primetals Technologies ensure autonomous operations, allowing for optimized productivity and high end-product quality**
- **Project will create 1,000 direct and 4,600 indirect jobs in Finland**

Blastr Green Steel is an Oslo-based company founded in 2021 with the mission to set new standards in green steel production. Recently, Blastr Green Steel has chosen Primetals Technologies as its technological partner for the development of a new 2.5 million tons-per-year steel production complex to be implemented in Inkoo, close to the city of Helsinki, Finland. When in operation, the steel plant and an integrated hydrogen production facility will provide approximately 1,000 direct and 4,600 indirect jobs in Finland.

As the market leader in environmental and energy-efficiency solutions for the metals industry with numerous highly innovative solutions in its portfolio, Primetals Technologies will ensure that the new facilities meet the latest industry standards.

"This partnership marks a significant milestone in our journey toward sustainable steel production and decarbonizing the steel value chain. By combining our strengths with industry leaders, we are poised to drive innovation and shape the future of steel production," says Mark Bula, CEO of Blastr Green Steel.

### **DRI Plant and 300-Ton EAF Ultimate**

The MIDREX H2 plant, powered by up to 100 percent green hydrogen, will be provided by a consortium of Midrex and Primetals Technologies. The plant will produce hot DRI for direct charging to the steel mill, as well as hot briquetted iron (HBI), enabling Blastr to decarbonize other value chains by providing ultra-low-carbon iron feedstock for customers.

“We are pleased and excited by the selection of MIDREX H2 as the DR technology by Blastr,” Midrex President and CEO K.C. Woody said. “The combination of up to 100 percent hydrogen-based HDRI and HBI production positions Blastr to be a key player in the decarbonization of European iron and steelmaking.”

Primetals Technologies will also supply an electric arc furnace based meltshop with a 300-ton EAF Ultimate designed for the direct charging of hot DRI and characterized by short tap-to-tap times, fully automated operation, and advanced control systems. A comprehensive secondary metallurgy scope is planned as well, comprising of a ladle furnace and an RH plant. The secondary metallurgy equipment will allow Blastr to produce top-quality steel grades for the highly demanding automotive sector.

In addition, Primetals Technologies will supply an off-gas treatment system and a waste heat recovery plant for the electric steelmaking plant, ensuring the most efficient reuse of energy.

"The production process will be augmented by digital technologies, feature the enhanced use of robot technology, and employ advanced solutions for remote control to enable the highest possible level of autonomous operations enhancing occupational safety, a top priority for the project," said Andreas Viehböck, Head of Upstream Technologies at Primetals Technologies.

### **Arvedi ESP – the Most Energy-Efficient Process**

The partnership also includes an Arvedi ESP thin slab casting and hot-rolling line as well as a state-of-the-art continuous pickling and galvanizing line to produce a variety of hot-rolled steel products including coated steel sheets for various industrial applications.

“Blastr’s ultra-low CO<sub>2</sub> targets require technology that ensures net-zero direct CO<sub>2</sub> emissions from steel production. The MIDREX plant, featuring an electric heater as an alternative to a gas-fired reformer/heater, and the Arvedi ESP technology, which is an officially certified carbon-neutral thin-slab casting and hot rolling process, are two key technologies needed on the path to meet our ambitious emission targets,” says Mikael Lindvall, Chief Technology Officer of Blastr Green Steel.

### **A Special Emphasis on Digitalization**

Primetals Technologies is also responsible for the full electrics and automation scope including the complete process automation systems as well as digitalization solutions for optimized production and energy management and comprehensive quality-control systems. Implementing a greenfield, state-of-the-art, integrated green steel production facility is a process that puts great expectations on the supplier. This also applies to the automation solutions, for which the need for quick learnings and evaluations will be particularly high.

During the conceptual development of the plant, a special emphasis has been placed on digitalization as well as on the enhanced use of robot technology, AI, and advanced solutions for remote control to allow for the highest possible level of autonomous operations. This will result in a high level of occupational safety and in an optimization of the production process, enabling a swift scaleup to full production capacity and a streamlined process from the get-go. Moreover, numerous AI-based digital assistant

systems integrated into a Central Operation Cockpit (COC) provide operators with all the information needed to operate the plant efficiently.



Blastr Green Steel selects Primetals Technologies as technological partner for a new plant in Inkoo, Finland.

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**Contact for journalists:**

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

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**Blastr Green Steel (Blastr)** aims to decarbonize the steel industry by creating an integrated green steel value chain that leverages Nordic advantages. By utilizing local raw materials and CO<sub>2</sub>-free energy and applying a circular economy thinking throughout the value chain, the company aims to produce 2.5 million tonnes of cost-competitive, ultra-low CO<sub>2</sub> steel, with ~90% lower scope 1-3 emissions than conventional steel production. Blastr Green Steel will be one of the largest industry start-ups in the Nordic region. Blastr Green Steel is part of Vanir Green Industries. For more information, visit [blastr.no](https://www.blastr.no)

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**Primetals Technologies, Limited**  
A Group Company of Mitsubishi Heavy Industries  
Communications

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

**Midrex, Inc.** is the world leader for direct reduction ironmaking technology and aftermarket solutions for the steel industry. As developer of the MIDREX® process, Midrex has designed, built, and serviced direct reduced iron (DRI) plants for 50-plus years. MIDREX plants produce approximately 80% of world's low CO<sub>2</sub> DRI.

The MIDREX process is highly flexible in reductant sources, iron oxide feed, and product discharge options. Plants can be configured to operate on natural gas, natural gas with hydrogen addition (MIDREX Flex™), and 100% hydrogen (MIDREX H2™). Iron oxide pellets and lump ores, regardless of their Fe content, can be transformed into either cold DRI (CDRI), hot DRI (HDRI), or hot briquetted iron (HBI). Plants can be designed for cold and hot discharge at the operator's discretion, and proven options are available for transporting and charging HDRI into an EAF.

The company's headquarters and research and technology development center are located in Charlotte, NC, USA. Midrex Technologies also has offices in the United Kingdom, China, India, and UAE. For more information, visit [midrex.com](https://www.midrex.com)

**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 Group Company of Mitsubishi Heavy Industries, with around 7,000 employees worldwide. To learn more about Primetals Technologies, visit the company website [primetals.com](https://www.primetals.com)