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## Primetals Technologies, Midrex and Metalloinvest lay solid foundation for development of green steelmaking

- **The companies sign contract for the construction of the world's largest hot briquetted iron (HBI) facility with approximate investments of over USD 600 million**
- **Start of operations in 2025, production capacity 2.08 million metric tons**
- **The new plant will strengthen Metalloinvest's leadership in the global market for HBI, the base product for low-carbon steelmaking**
- **The contracted plant can be converted to use up to 100% hydrogen as a reducing agent**
- **The contract includes provisions for engineering, supplies and advisory services**

Metalloinvest has contracted with Primetals Technologies and consortium partner Midrex Technologies, Inc. to supply the new HBI Plant (HBI-4) at Lebedinsky GOK (LGOK). The plant will be located in Gubkin, Russia, and will be designed to produce 2.08 million metric tons of HBI per year. Its modern design features will ensure reduced energy consumption and environmental impact. Investment in the construction of the plant is estimated at over USD 600 million. The project will create 375 highly qualified jobs and is expected to become operational in the first half of 2025 (first product – December 2024).

HBI is a low-carbon raw material used for steel production in electric furnaces and generates up to 50% less CO<sub>2</sub> (scope 1 + scope 2) than the traditional blast-furnace method. The contracted plant can be converted to use up to 100% hydrogen as a reducing agent, which makes possible further reduction of CO<sub>2</sub> emissions. Midrex and Primetals Technologies will be responsible for engineering, supply of main technological equipment, as well as for supervision services.

The agreement was signed by Nazim Efendiev, CEO of Metalloinvest; Stephen Montague, President and CEO of Midrex; Aashish Gupta, Executive Vice president of Primetals Technologies, and Etsuro Hirai, Chief Technology Officer of Primetals Technologies and CEO of Primetals Technologies Austria, during an official forum between Austrian and Russian governmental delegations in Vienna.

Earlier this year Mikhailovsky HBI, which was jointly established by USM and Mikhailovsky GOK (part of Metalloinvest), contracted Midrex and Primetals Technologies for another HBI plant to be built in Russia.

Additional production volume will secure Metalloinvest's leading position on global HBI market.

Nazim Efendiev, CEO of Metalloinvest, said: "Two new facilities will double joint production capacity of USM and Metalloinvest – from 4.6 to 9 million tons of HBI per year. This will strengthen our position as a leading provider of this crucial element in the transition to greener steel production. That is a significant milestone in the global steel industry's decarbonisation efforts. We highly appreciate the expertise of our partners Primetals Technologies and Midrex, and we are looking forward to jointly implementing the project according to our tight deadlines".

Stephen Montague, President and CEO of Midrex said: "HBI-4 will further increase Metalloinvest's dominant position to supply merchant HBI to meet the growing demand for low-CO<sub>2</sub> metallics. Our H<sub>2</sub>-ready technology is the right step towards green steelmaking and carbon neutrality".

Etsuro Hirai, CEO of Primetals Technologies Austria said: "HBI helps steel producers to reduce the carbon footprint of their products while increasing its competitiveness. Together with Alisher Usmanov's companies, we are creating the basis for the development and steady movement forward of the European green metallurgy".

Metalloinvest, Primetals Technologies and Midrex Technologies have successfully implemented 1.4 million tons per year HBI plant (HBI-2) started up in 2007 and of a 1.8 million tons per year HBI plant (HBI-3) in 2017. All three currently operational HBI modules at Lebedinsky GOK (HBI-1, HBI-2 and HBI-3) jointly produce 4.6 million tons HBI per year.

The new contract once again proves Midrex Direct Reduction Technology as the leading technology in the market with a market share of 80%. The new plant includes a 7.15m diameter Midrex Shaft Furnace and a proprietary Midrex Reformer that uses low NO<sub>x</sub> burners for NO<sub>x</sub> reduction. An increased top gas pressure ensures higher furnace productivity and reduced power consumption. A flue gas hot fan additionally reduces electric power consumption. Also, a hot fines recycling system will be included. The level 1 and level 2 automation systems, including the DRIpax expert system, are also part of the project.

The Midrex Plant produces high-quality HBI from iron ore pellets using the natural gas-based Midrex Direct Reduction Process (Midrex NG) - the most environmentally friendly technology for ore-based ironmaking. Compared to traditional ironmaking technologies, the carbon footprint of a Midrex NG plant

is reduced by more than 50% compared with blast furnace ironmaking. By replacing natural gas with green hydrogen, there is potential to further decrease carbon emissions in the future. The contracted plant is capable of being converted in the future to use up to 100% hydrogen as a reducing agent.

MIDREX is a registered trademark of Kobe Steel, Ltd.

MIDREX NG is a trademark of Midrex Technologies Inc.



Midrex HBI plants HBI-2 and HBI-3 at Lebedinsky GOK. HBI-4 will be built on the green field on the rear left side of this picture. © Metalloinvest.

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

#### **Media Contacts:**

**Metalloinvest:** Anton Troshin, +7 (495) 981-55-55, [pr@metalloinvest.com](mailto:pr@metalloinvest.com)

**Midrex:** Lauren Lorraine, +1 (704) 378-3308, [llorraine@midrex.com](mailto:llorraine@midrex.com)

**Primetals Technologies:** Dr. Rainer Schulze, +49 9131 9886-417, [rainer.schulze@primetals.com](mailto:rainer.schulze@primetals.com)

**Metalloinvest** is a leading metals and mining company with the second-largest proven iron ore reserves on a JORC-equivalent basis (13.8 billion tonnes and about 136 years of reserve life). The company is the world's largest producer and supplier of merchant hot briquetted iron (HBI) products, a low-carbon raw material used to produce green steel; Metalloinvest holds a leading position in the production of pellets, iron ore concentrate and high-quality steel.

In H1 2021, revenue amounted to USD 5.1 bn; EBITDA – USD 2.9 bn. The company has 10+ years track record on public debt capital markets with high credit ratings: Fitch (BBB-/stable), S&P (BBB-/stable), Moody's (Baa3/stable), ACRA (AA+(RU)/positive).

Alisher Usmanov is the main beneficiary of the company (with a 49% stake) through Holding Company USM LLC.

Ticker (Bloomberg): METIN RU; official website: [www.metalloinvest.com/en/](http://www.metalloinvest.com/en/)

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#### **Primetals Technologies, Limited**

A joint venture of Mitsubishi Heavy Industries and partners  
Communications  
Head: Gerlinde Djumlija

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

**Midrex** is the world leader for direct reduction ironmaking technology and aftermarket solutions for the steel industry. As the technology provider of the MIDREX® Process for 50-plus years, Midrex designs, builds and services Direct Reduced Iron (DRI) plants. The MIDREX Process fits the need of steelmakers seeking a dependable and clean source of iron. Each year, MIDREX Plants produce more than 60% of the world's DRI in its three forms: cold DRI (CDRI), hot DRI (HDR), and hot briquetted iron (HBI). The MIDREX Process is unsurpassed in the industry in terms of production and process flexibility. 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 Dubai.. For more information, please visit [www.midrex.com](http://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 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](http://www.primetals.com).