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Kobe Steel, Ltd.

News Release

Low-CO₂ steel Kobenable Steel extends its use to vessels

Kobe Steel, Ltd. announces today that its low-CO₂ blast furnace steel product Kobenable Steel will be used for a 180,000-ton class bulk carrier*¹ built by Imabari Shipbuilding Co., Ltd. This makes it the first shipbuilding company in the world to use Kobenable Steel. The vessel will employ Kobenable Premier, which reduces 100% of CO₂ emissions in steel production based on the mass balance method*². Kobe Steel is the first Japanese steelmaker that commercialized low-CO₂ blast furnace steel products in 2022.

As an initiative to achieve the Sustainable Development Goals (SDGs), Imabari Shipbuilding is working to improve the efficiency of transportation of materials and equipment and to reduce power consumption and the amount of raw materials used in the manufacturing process with the aim of "developing environmentally friendly ships" and "realizing environmentally friendly manufacturing." The company adopted Kobenable Steel for its ability to lower CO₂ emissions in shipbuilding compared to conventional steel products.

Kobenable Steel, developed by the Kobe Steel Group (also known as the KOBELCO Group) based on its original CO₂ reduction solution for blast furnace ironmaking,*³ is available for all types of steel products (steel sheets, steel plates, wire rods and bars) manufactured at Kobe Steel's Kakogawa Works and Kobe Wire Rod & Bar Plant. In addition, since it maintains the same level of high quality as conventional products, customers can use low-CO₂ blast furnace steel for products that require high quality, such as special steel wire rods and ultra-high-tensile strength steel, which are specialties of the Group.

The KOBELCO Group will contribute to a green society by providing low-CO₂ blast furnace steel to a wide range of fields leveraging the comprehensive strength of the Group, which operates diverse businesses. To be a corporate group indispensable to our stakeholders, our Group will continue to provide solutions to the needs of society with its integrated capabilities that combine a wide array of businesses, technologies, and human resources.

*1 Bulk carrier

A bulk carrier is a ship that carries and transports unpacked bulk cargo such as ore and grains.



*2 Mass-balance method

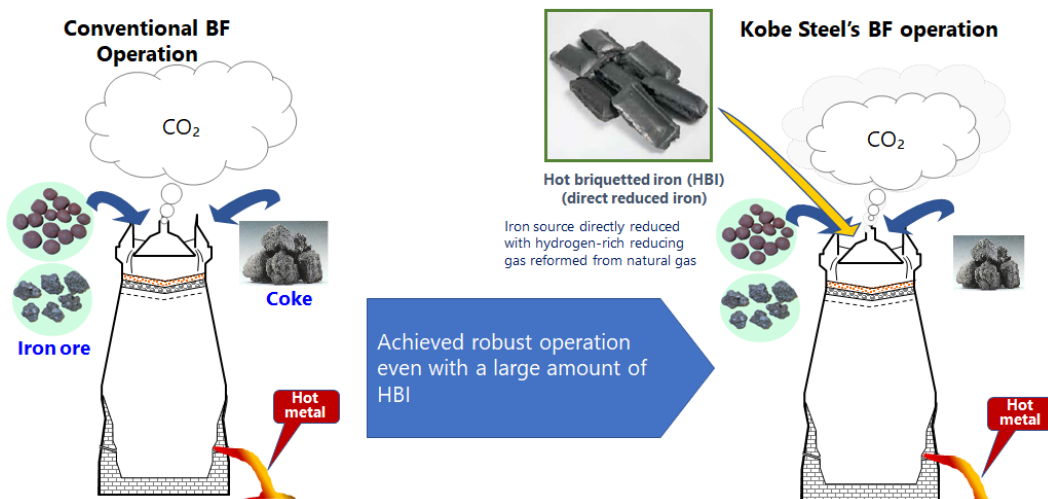
The mass-balance method is to allocate specific characteristics to a certain portion of products according to the input amount of raw materials when there is a mix of raw materials with and with no such characteristics (e.g., CO₂ reduction effects) in the manufacturing process.

*3 KOBELCO Group's original CO₂ reduction solution for blast furnace ironmaking

This technology, demonstrated at Kobe Steel's production site Kakogawa Works, achieves a significant reduction of CO₂ emissions from the blast furnace by charging into the blast furnace a large amount of hot briquetted iron (HBI) manufactured via the MIDREX[®] Process, a direct reduced ironmaking process, accounting for about 80% of the world's natural gas-based direct reduced iron (DRI) production (60% of the world's overall DRI). It can reduce CO₂ emissions in the blast furnace ironmaking process by 20-40%.

KOBELCO Group's original CO₂ reduction solution for blast furnace ironmaking

- Reducing the amount of coke used for reduction is an effective way to reduce CO₂ emissions in blast furnaces.
- By replacing part of the iron ore with HBI, a raw material for steel that has already been reduced, Kobe Steel has reduced the amount of coke used and **achieved 20% reduction in CO₂ emissions from the blast furnace** (about twice the reduction compared to conventional technologies).



Kobenable Steel trademark



Product categories of Kobe Steel low CO₂ blast furnace steel

Categories	CO ₂ reduction rate per ton <small>(compared to 2018 levels)</small>
Kobenable Premier	100%
Kobenable Half	50%