Technologies for Capturing and Biorefining CO_2 at Ferrous Metallurgy Enterprises

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key words

carbon dioxide, decarbonization, ferrous metallurgy, biotechnologies, low-carbon development

For the ferrous metallurgy industry, the low-carbon development strategy is one of the most challenging due to the high energy intensity of production, the use of carbon as a raw material for technological processes, the capital intensity of enterprises, the long service life of assets, sales problems, low business profitability, and the lack of financial incentives for decarbonization. This article analyzes modern domestic and international technologies for capturing and biorefining carbon dioxide emissions. The potential for their use in ferrous metallurgy enterprises is substantiated. The research results can be used by metallurgical company management to formulate low-carbon business development strategies, make decisions on technological decarbonization of operations, and engage in commercial cooperation with the biogas processing sector.

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