

Title (en)

METHOD FOR CHARGING RAW MATERIAL INTO BLAST FURNACE

Title (de)

VERFAHREN ZUM BESCHICKEN EINES HOCHOFENS MIT ROHMATERIAL

Title (fr)

PROCÉDÉ POUR CHARGER UNE MATIÈRE PREMIÈRE DANS UN HAUT-FOURNEAU

Publication

EP 4083235 A4 20230705 (EN)

Application

EP 20916867 A 20201127

Priority

- JP 2020012083 A 20200129
- JP 2020044357 W 20201127

Abstract (en)

[origin: EP4083235A1] Provided is a method for charging raw material into a blast furnace which enables the formation of coke-mixed ore layers for securing gas permeability in the furnace and maintaining high reduction reactivity. The method for charging raw material into a blast furnace in which a mixture of ore and mixing coke is charged into the blast furnace in two or more separated batches by using a bell-less charging equipment with a charging chute, includes classifying the ore into coarse grain ore and fine grain ore having a smaller average grain diameter than the coarse grain ore, mixing the coarse grain ore with the mixing coke to prepare coke-mixed coarse grain ore, and mixing the fine grain ore with the mixing coke to prepare coke-mixed fine grain ore; and charging, at least in a first batch, the entirety or a part of the coke-mixed coarse grain ore into the blast furnace by tilting the charging chute from a position closer to a center of the blast furnace than a midpoint between the center of the blast furnace and a wall of the blast furnace in a radial direction of the blast furnace toward the wall of the blast furnace.

IPC 8 full level

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CPC (source: EP KR)

C21B 5/003 (2013.01 - EP KR); **C21B 5/007** (2013.01 - EP KR); **C21B 5/008** (2013.01 - EP KR); **C21B 7/18** (2013.01 - KR); **C21B 7/20** (2013.01 - EP)

Citation (search report)

- [X] JP S5562106 A 19800510 - NIPPON STEEL CORP
- [X] JP S60208404 A 19851021 - KAWASAKI STEEL CO
- [A] JP S63140006 A 19880611 - KAWASAKI STEEL CO
- See references of WO 2021152989A1

Designated contracting state (EPC)

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