

Title (en)

METHOD OF MANUFACTURING LOW PHOSPHOROUS HOT METAL

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PHOSPHORARMEM HEISSEM METALL

Title (fr)

PROCEDE DE FABRICATION DE METAL EN FUSION A BASSE TENEUR EN PHOSPHORE

Publication

EP 1533388 A4 20110202 (EN)

Application

EP 02807713 A 20020827

Priority

JP 0208604 W 20020827

Abstract (en)

[origin: EP1533388A1] The invention is to implement an efficient dephosphorization treatment without adding a large amount of CaF₂ and with a small addition amount of a refining agent. The invention is made based on the finding that a very efficient dephosphorization refinement utilizing an inhomogeneous molten state of slag can be implemented by feeding a gaseous oxygen and a refining agent onto a bath surface of a molten iron in a specific mode under conditions wherein a post-treatment slag is reduced appreciably in comparison to a conventional case. The dephosphorization treatment is performed by blowing the gaseous oxygen and at least a part of the refining agent onto the bath surface of the molten iron through a top blowing lance. Concurrently, the post-treatment slag rate is controlled to 30 kg/ton of molten iron or less, preferably to 20 kg/ton of molten iron or less, and more preferably 10 kg/ton of molten iron or less. In addition, the dephosphorization treatment be performed for an molten iron having a Si content of 0.15 mass% or less, more preferably 0.07 mass% or less, and particularly preferably 0.03 mass% or less. <IMAGE>

IPC 1-7

C21C 1/02

IPC 8 full level

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CPC (source: EP KR)

C21C 1/02 (2013.01 - EP); **C21C 1/025** (2013.01 - EP); **C21C 5/32** (2013.01 - EP); **C21C 5/35** (2013.01 - KR); **C21C 5/36** (2013.01 - EP); **C21C 7/064** (2013.01 - EP); **C21C 7/0645** (2013.01 - EP); **C21C 7/072** (2013.01 - EP)

Citation (search report)

- [A] JP S58147506 A 19830902 - KAWASAKI STEEL CO
- [A] JP S5819423 A 19830204 - KAWASAKI STEEL CO
- [A] JP 2000129329 A 20000509 - SUMITOMO METAL IND
- [A] JP H08311523 A 19961126 - SUMITOMO METAL IND
- See references of WO 2004020677A1

Cited by

US5262387A; JP2015206091A

Designated contracting state (EPC)

BE DE

DOCDB simple family (publication)

EP 1533388 A1 20050525; **EP 1533388 A4 20110202**; **EP 1533388 B1 20130814**; BR 0213573 A 20041026; BR 0213573 B1 20131112; KR 100681292 B1 20070209; KR 20040053371 A 20040623; WO 2004020677 A1 20040311

DOCDB simple family (application)

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