Title (en)

PROCESS FOR DECARBONISING A HIGH-CHROMIUM STEEL MELT

Title (de)

VERFAHREN ZUM ENTKOHLEN EINER HOCHCHROMHALTIGEN STAHLSCHMELZE

Title (fr)

PROCEDE DE DECARBURATION D'UN ACIER EN FUSION A HAUTE TENEUR EN CHROME

Publication

EP 0857222 B1 20000105 (DE)

Application

EP 96938964 A 19961014

Priority

- DE 9601970 W 19961014
- DE 19540490 A 19951023

Abstract (en)

[origin: US6093235A] PCT No. PCT/DE96/01970 Sec. 371 Date Apr. 23, 1998 Sec. 102(e) Date Apr. 23, 1998 PCT Filed Oct. 14, 1996 PCT Pub. No. WO97/15692 PCT Pub. Date May 1, 1997A process for decarburizing a steel melt for the production of high-chromium steels by blowing in oxygen in which the decarburization rate is continuously measured and the amount of oxygen to be injected is adjusted depending on the measured values. The following controlled quantities are calculated: a) the duration of the Al-Si oxidation phase at the start of the decarburization process, b) the duration of a principle decarburization phase immediately following the Al-Si oxidation phase until the transition point from the decarburization reaction to the metal oxidation is reached, and c) the decarburization rate in the principal decarburization phase. The injected oxygen quantity is increased at an accelerated rate immediately following the Al-Si oxidation phase to the oxygen quantity of the principal decarburization phase until the decarburization rate calculated in c) is reached. The decarburization rate is maintained substantially constant for the duration of the principal decarburization phase by the injected quantity of oxygen. The injected oxygen quantity is continuously reduced immediately following the principal decarburization phase so that the decarburization rate decreases continuously in time at a predetermined time constant.

IPC 1-7

C21C 7/068; C21C 5/30

IPC 8 full level

C21C 5/30 (2006.01); **C21C 7/068** (2006.01)

CPC (source: EP KR US)

C21C 5/30 (2013.01 - EP KR US); **C21C 7/068** (2013.01 - KR); **C21C 7/0685** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE DE DK ES FI FR GB IT LU NL SE

DOCDB simple family (publication)

US 6093235 A 20000725; AT E188511 T1 20000115; AU 701824 B2 19990204; AU 7619796 A 19970515; BR 9611224 A 19990406; CN 1063493 C 20010321; CN 1200768 A 19981202; CZ 125298 A3 19980812; DE 19540490 C1 19970410; DE 59604131 D1 20000210; EP 0857222 A1 19980812; EP 0857222 B1 20000105; ES 2140912 T3 20000301; JP 3190351 B2 20010723; JP H11504079 A 19990406; KR 100275100 B1 20001215; KR 19990044696 A 19990625; MX 9802987 A 19980930; PL 186610 B1 20040130; PL 326503 A1 19980928; RU 2139355 C1 19991010; SK 283186 B6 20030304; SK 50198 A3 19990111; WO 9715692 A1 19970501

DOCDB simple family (application)

US 6648398 A 19980423; AT 96938964 T 19961014; AU 7619796 A 19961014; BR 9611224 A 19961014; CN 96197803 A 19961014; CZ 125298 A 19961014; DE 19540490 A 19951023; DE 59604131 T 19961014; DE 9601970 W 19961014; EP 96938964 A 19961014; ES 96938964 T 19961014; JP 51618997 A 19961014; KR 19980701953 A 19980316; MX 9802987 A 19980416; PL 32650396 A 19961014; RU 98109904 A 19961014; SK 50198 A 19961014