

Title (en)

METHOD AND DEVICE FOR PRODUCING SILICON-RICH FOUNDRY IRON

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ERZEUGUNG VON SILIZIUMREICHEN GIESSEREIROHEISEN

Title (fr)

PROCEDE ET DISPOSITIF POUR PRODUIRE DE LA FONTE BRUTE DE FONDERIE RICHE EN SILICIUM

Publication

EP 0946760 A1 19991006 (DE)

Application

EP 97918880 A 19970725

Priority

- DE 9701609 W 19970725
- DE 19632403 A 19960802

Abstract (en)

[origin: WO9805800A1] The invention concerns a method and device for producing silicon-rich foundry iron. The method is characterized by the following steps: a) a shaft furnace is charged with silicon oxide and iron-carbon metals; b) the charge is maintained in a highly reductive atmosphere; c) the column of material is guided in an annular manner at least in the vicinity of the vessel base; and d) is exposed to the radiant heat of a heat source located in the free space in the region into which the annular column of material opens above the furnace base. The direct current furnace, which has a central electrode which projects into the furnace vessel and is guided as far as the vicinity of the base and a counter electrode disposed in the base of the furnace vessel, is characterized in that the electrode projecting into the vessel is surrounded by a coaxial sleeve, the ratio between the outer diameter (d) of the sleeve and the inner diameter (D) of the furnace vessel being 1:4, and the mouth of the sleeve being disposed at a spacing (a) from the furnace vessel base according to the relationship $2 \times d \leq a \leq 4 \times d$.

IPC 1-7

C21C 1/08; **C21B 13/02**

IPC 8 full level

C21B 13/02 (2006.01); **C21C 1/08** (2006.01); **C22B 9/187** (2006.01)

CPC (source: EP US)

C21B 13/026 (2013.01 - EP US); **C21C 1/08** (2013.01 - EP US)

Citation (search report)

See references of WO 9805800A1

Designated contracting state (EPC)

AT DE FR GB GR IT

DOCDB simple family (publication)

WO 9805800 A1 19980212; AT E204915 T1 20010915; AU 4293997 A 19980225; BR 9711010 A 19990817; CA 2262490 A1 19980212; CA 2262490 C 20081014; CZ 34999 A3 19990512; DE 19632403 C1 19980326; DE 59704480 D1 20011004; EP 0946760 A1 19991006; EP 0946760 B1 20010829; NO 323393 B1 20070423; NO 990439 D0 19990129; NO 990439 L 19990129; PL 331421 A1 19990719; SK 12899 A3 19990712; SK 283573 B6 20030911; TW 461921 B 20011101; US 6235075 B1 20010522; ZA 976825 B 19980211

DOCDB simple family (application)

DE 9701609 W 19970725; AT 97918880 T 19970725; AU 4293997 A 19970725; BR 9711010 A 19970725; CA 2262490 A 19970725; CZ 34999 A 19970725; DE 19632403 A 19960802; DE 59704480 T 19970725; EP 97918880 A 19970725; NO 990439 A 19990129; PL 33142197 A 19970725; SK 12899 A 19970725; TW 86111021 A 19970801; US 1141698 A 19980306; ZA 976825 A 19970731