

Title (en)
SHAFT FURNACE

Title (de)
SCHACHTOFEN

Title (fr)
FOUR VERTICAL

Publication
EP 1105542 B1 20040107 (DE)

Application
EP 99934663 A 19990712

Priority
• AT 139298 A 19980813
• EP 9904875 W 19990712

Abstract (en)
[origin: WO0009765A1] The invention relates to a shaft furnace, especially a direct reduction shaft furnace, with a charge of lump materials (2), especially materials containing iron oxide and/or spore iron, which can be introduced into the furnace from above and also comprising a plurality of inlets (3) for a reduction gas arranged on a plane in the region of the lower third part of the furnace, whereby the profile of the furnace has an extended diameter (7) and a cavity (8) is formed between the gas inlets (3) and the charge (2). The inventive furnace enables gas to be supplied and distributed in a uniform manner along the periphery of said furnace.

IPC 1-7
C21B 13/02; **C21B 13/14**; **F27B 1/10**

IPC 8 full level
C21B 13/02 (2006.01); **F27B 1/10** (2006.01); **F27B 1/16** (2006.01)

CPC (source: EP KR US)
C21B 7/02 (2013.01 - KR); **C21B 13/02** (2013.01 - EP US); **F27B 1/10** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0009765 A1 20000224; AT 407192 B 20010125; AT A139298 A 20000515; AU 5035999 A 20000306; AU 756280 B2 20030109; BR 9912796 A 20010502; CA 2338069 A1 20000224; CA 2338069 C 20050111; CN 1243835 C 20060301; CN 1312861 A 20010912; CZ 2001506 A3 20011017; CZ 299007 B6 20080402; DE 59908260 D1 20040212; EP 1105542 A1 20010613; EP 1105542 B1 20040107; ID 27806 A 20010426; JP 2002522641 A 20020723; JP 4467796 B2 20100526; KR 100641466 B1 20061031; KR 20010072469 A 20010731; MY 123031 A 20060531; PL 193740 B1 20070330; PL 346054 A1 20020114; RU 2226552 C2 20040410; SK 1782001 A3 20011008; SK 286273 B6 20080606; TR 200100405 T2 20010723; TW 490490 B 20020611; UA 60371 C2 20031015; US 6511629 B1 20030128; ZA 200100679 B 20020327

DOCDB simple family (application)
EP 9904875 W 19990712; AT 139298 A 19980813; AU 5035999 A 19990712; BR 9912796 A 19990712; CA 2338069 A 19990712; CN 99809599 A 19990712; CZ 2001506 A 19990712; DE 59908260 T 19990712; EP 99934663 A 19990712; ID 20010320 A 19990712; JP 2000565198 A 19990712; KR 20017001884 A 20010213; MY PI9903130 A 19990726; PL 34605499 A 19990712; RU 2001107018 A 19990712; SK 1782001 A 19990712; TR 200100405 T 19990712; TW 88112031 A 19990715; UA 01031477 A 19990712; US 76278501 A 20010411; ZA 200100679 A 20010124