

Title (en)
STAVE FOR COOL SHAFT KILNS

Title (de)
KÜHLPLATTE FÜR KÜHLSCHACHTÖFEN

Title (fr)
PLAQUE DE REFROIDISSEMENT POUR FOUR DROIT

Publication
EP 1183396 B1 20031203 (DE)

Application
EP 00926820 A 20000406

Priority
• DE 19915942 A 19990409
• DE 10000987 A 20000113
• EP 0003063 W 20000406

Abstract (en)
[origin: US6660222B1] A cooling plate for shaft furnaces, in particular, for blast furnaces, provided with a refractory lining, comprising cooling channels loadable with a cooling medium, wherein at least the front side facing the interior of the furnace is comprised of an ingot, produced preferably of copper or a low-alloy copper alloy and provided with grooves for receiving refractory material, is to be further developed such that it can be produced with a minimal material expenditure and a minimal manufacturing expenditure and can be easily mounted, and that with it a higher cooling capacity with reduced cooling medium throughput can be realized, wherein the own heat uptake is limited such that a significantly longer service life can be obtained. For this purpose it is suggested that two through-shaped rolled sections with their domed areas facing outwardly, respectively, are welded together and that bores for receiving the ends of pipe connector pieces are introduced into the backside supplemental section and the ends welded thereto, and that the free ends of the rolled sections are closed off by caps.

IPC 1-7
C21B 7/10; **F27B 1/24**

IPC 8 full level
C21B 7/10 (2006.01); **F27D 1/12** (2006.01); **F27D 9/00** (2006.01)

CPC (source: EP US)
C21B 7/10 (2013.01 - EP US); **F27D 1/12** (2013.01 - EP US); **F27D 2009/004** (2013.01 - EP US); **F27D 2009/0062** (2013.01 - EP US)

Cited by
CN113747759A

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)
US 6660222 B1 20031209; AT E255642 T1 20031215; AU 4544000 A 20001114; AU 776335 B2 20040902; BR 0009201 A 20011226; CA 2365959 A1 20001019; CN 1203191 C 20050525; CN 1347461 A 20020501; EA 003520 B1 20030626; EA 200101061 A1 20020228; EP 1183396 A1 20020306; EP 1183396 B1 20031203; ES 2211539 T3 20040716; JP 2002541328 A 20021203; MX PA01010142 A 20041015; PL 351255 A1 20030407; PT 1183396 E 20040430; WO 0061821 A1 20001019

DOCDB simple family (application)
US 95838402 A 20020103; AT 00926820 T 20000406; AU 4544000 A 20000406; BR 0009201 A 20000406; CA 2365959 A 20000406; CN 00806086 A 20000406; EA 200101061 A 20000406; EP 0003063 W 20000406; EP 00926820 A 20000406; ES 00926820 T 20000406; JP 2000610869 A 20000406; MX PA01010142 A 20000406; PL 35125500 A 20000406; PT 00926820 T 20000406