

Title (en)

COOLING ELEMENT FOR COOLING A METALLURGICAL FURNACE

Title (de)

KÜHLELEMENT ZUR KÜHLUNG EINES METALLURGISCHEN OFENS

Title (fr)

ELEMENT DE REFROIDISSEMENT DESTINE AU REFROIDISSEMENT D'UN FOUR METALLURGIQUE

Publication

EP 1381817 B1 20050511 (DE)

Application

EP 02724254 A 20020322

Priority

- DE 10119034 A 20010418
- EP 0203209 W 20020322

Abstract (en)

[origin: WO02084192A1] The invention relates to a cooling element for cooling a metallurgical furnace, in which the side of the furnace shell (113, 213, 313) that faces the interior of the furnace (Oi) is lined with fireproof material (114, 214, 314). Said element has a cooling part (2, 102, 202, 302) and a heating part that is cooled by thermal conduction (4, 104, 204, 304), and allows a protective layer against further clinker ("freeze-line") to form immediately in operating mode. The entire heating part consists only of a thin plate (5, 105, 205, 305), to which a separate cooling part (2, 102, 202, 302) is allocated on the cold side in the form of a pipe. The invention also relates to corresponding cooling systems and to a melting furnace.

IPC 1-7

F27B 3/24; **C21B 7/10**; **F27B 1/24**; **F27D 1/12**

IPC 8 full level

C21B 7/00 (2006.01); **C21B 7/10** (2006.01); **F27B 1/24** (2006.01); **F27B 3/24** (2006.01); **F27D 1/12** (2006.01); **F27D 9/00** (2006.01)

CPC (source: EP)

C21B 7/10 (2013.01); **F27B 3/24** (2013.01); **F27D 1/12** (2013.01); **F27D 2009/0054** (2013.01)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 02084192 A1 20021024; AT E295521 T1 20050515; CN 100342194 C 20071010; CN 1518657 A 20040804; DE 10119034 A1 20021024; DE 50203089 D1 20050616; EP 1381817 A1 20040121; EP 1381817 B1 20050511; ES 2242855 T3 20051116; PT 1381817 E 20050831; RU 2003133461 A 20050510; RU 2281974 C2 20060820; ZA 200308040 B 20040607

DOCDB simple family (application)

EP 0203209 W 20020322; AT 02724254 T 20020322; CN 02812254 A 20020322; DE 10119034 A 20010418; DE 50203089 T 20020322; EP 02724254 A 20020322; ES 02724254 T 20020322; PT 02724254 T 20020322; RU 2003133461 A 20020322; ZA 200308040 A 20031016