

Title (en)

Device to close or open the bottom of a charging unit of a blast furnace

Title (de)

Vorrichtung zum Verschliessen oder Öffnen einer Bodenöffnung eines Materialbunkers für einen Hochofen

Title (fr)

Dispositif pour fermer ou ouvrir l'ouverture à fond d'un dispositif de chargement d'un haut-fourneau

Publication

EP 1496127 B1 20080924 (DE)

Application

EP 04012112 A 20040521

Priority

DE 10327276 A 20030617

Abstract (en)

[origin: EP1496127A2] The device has a tilting disk (10) connected to a drive. The tilting disk is articulated to two swivel arms (15,16) pivotably mounted about two swivel axes (13,14) extending parallel to each other. The tilting disk move from closed to open position and vice versa upon movement of the swivel arms along oppositely directed arc paths (23,24). The edge areas of the tilting disk are situated perpendicular to the swivel axes of the swivel arms.

IPC 8 full level

C21B 7/00 (2006.01); **C21B 7/18** (2006.01); **F27B 1/20** (2006.01); **F27D 3/00** (2006.01); **F27D 3/10** (2006.01)

CPC (source: EP KR US)

C21B 7/00 (2013.01 - KR); **C21B 7/18** (2013.01 - EP KR US); **F27B 1/20** (2013.01 - EP US); **F27D 3/10** (2013.01 - EP US); **F27D 2003/105** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1496127 A2 20050112; **EP 1496127 A3 20051012**; **EP 1496127 B1 20080924**; AT E409240 T1 20081015; BR PI0402221 A 20050125; CA 2471058 A1 20041217; CN 1619243 A 20050525; DE 10327276 A1 20050105; DE 502004008109 D1 20081106; JP 2005008984 A 20050113; KR 20040111077 A 20041231; RU 2004117325 A 20060110; UA 82655 C2 20080512; US 2004262324 A1 20041230; US 7156371 B2 20070102

DOCDB simple family (application)

EP 04012112 A 20040521; AT 04012112 T 20040521; BR PI0402221 A 20040615; CA 2471058 A 20040616; CN 200410059771 A 20040617; DE 10327276 A 20030617; DE 502004008109 T 20040521; JP 2004177759 A 20040616; KR 20040044482 A 20040616; RU 2004117325 A 20040609; UA 20040604630 A 20040614; US 86947304 A 20040616