

Title (en)

APPARATUS FOR CONTINUOUS CASTING OF MAGNESIUM BILLET OR SLAB USING ELECTROMAGNETIC FIELD AND THE METHOD THEREOF

Title (de)

VORRICHTUNG ZUM STRANGGIESSEN EINES MAGNESIUMSTRANGS ODER EINER MAGNESIUMBRAMME UNTER VERWENDUNG EINES ELEKTROMAGNETISCHEN FELTS UND VERFAHREN DAFÜR

Title (fr)

APPAREIL DE COULAGE CONTINU DE BILLETES OU DE PLAQUES DE MAGNESIUM AU MOYEN D'UN CHAMP ELECTROMAGNETIQUE ET SON PROCEDE DE FABRICATION

Publication

**EP 1833628 A1 20070919 (EN)**

Application

**EP 05821971 A 20051222**

Priority

- KR 2005004438 W 20051222
- KR 20040111236 A 20041223
- KR 20040111235 A 20041223

Abstract (en)

[origin: WO2006068424A1] An apparatus for continuous casting of magnesium billets or slabs using an electromagnetic field, and a method thereof compensates small solidification latent heat of magnesium, controls a solidification speed, and stirs molten metal within a mold via an electromagnetic field, thereby enabling continuous casting. The apparatus comprises a mold for continuous casting an as-cast billet or slab, a coil positioned outside the mold and adapted to allow electric current to be applied thereto, and a cooling nozzle positioned outside the mold and the as-cast billet or slab. During casting, electric current having a frequency of 2 ~ 1,000 D or electric current of 50 ~ 10,000 A having a frequency of 200 ~ 200,000 D is applied to the coil. A magnesium billet or slab having enhanced inner quality can be produced at a high casting speed without surface defects by applying a low frequency or high frequency electromagnetic field to the mold during continuous casting of magnesium.

IPC 8 full level

**B22D 11/049** (2006.01); **B22D 11/00** (2006.01)

CPC (source: EP US)

**B22D 11/001** (2013.01 - EP US); **B22D 11/115** (2013.01 - EP US)

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**WO 2006068424 A1 20060629**; EP 1833628 A1 20070919; EP 1833628 A4 20090318; JP 2008525197 A 20080717; US 2008179038 A1 20080731

DOCDB simple family (application)

**KR 2005004438 W 20051222**; EP 05821971 A 20051222; JP 2007548075 A 20051222; US 72278305 A 20051222