

Title (en)

CASTING EQUIPMENT AND CASTING METHOD USING SAME

Title (de)

GIESSVORRICHTUNG UND GIESSVERFAHREN DAMIT

Title (fr)

ÉQUIPEMENT DE COULÉE ET PROCÉDÉ DE COULÉE L'UTILISANT

Publication

**EP 3539689 A4 20200122 (EN)**

Application

**EP 17870275 A 20171102**

Priority

- KR 20160148865 A 20161109
- KR 2017012308 W 20171102

Abstract (en)

[origin: EP3539689A1] The present disclosure relates to casting equipment and a casting method using same. A casting method includes: preparing a tundish; injecting molten steel to the tundish; installing a vacuum forming member on an upper portion of the tundish to form vacuum in at least a partial area of an upper portion of a melting surface of molten steel accommodated in the tundish; forming a rotational flow by blowing a gas into the molten steel; and forming vacuum in at least a partial area of the upper portion of the melting surface of the molten steel. More particularly, the present disclosure may effectively remove inclusions in the molten steel and restrict reoxidation of the molten steel.

IPC 8 full level

**B22D 11/103** (2006.01); **B22D 11/113** (2006.01); **B22D 11/117** (2006.01); **B22D 11/18** (2006.01); **B22D 41/00** (2006.01)

CPC (source: EP KR US)

**B22D 11/103** (2013.01 - EP KR US); **B22D 11/113** (2013.01 - EP KR US); **B22D 11/114** (2013.01 - EP); **B22D 11/117** (2013.01 - EP KR US); **B22D 11/118** (2013.01 - EP); **B22D 11/18** (2013.01 - EP US); **B22D 11/181** (2013.01 - KR); **B22D 41/00** (2013.01 - EP KR US)

Citation (search report)

- [X] JP 2003119515 A 20030423 - SUMITOMO METAL IND
- [Y] KR 20140129895 A 20141107 - HYUNDAI STEEL CO [KR]
- [Y] JP 2006035272 A 20060209 - JFE STEEL KK
- [A] LIFENG ZHANG ET AL: "Fluid flow and inclusion removal in continuous casting tundish", METALLURGICAL AND MATERIALS TRANSACTIONS B, SPRINGER-VERLAG, NEW YORK, vol. 31, no. 2, April 2000 (2000-04-01), pages 253 - 266, XP019697166, ISSN: 1543-1916, DOI: 10.1007/s11663-000-0044-9
- See references of WO 2018088753A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3539689 A1 20190918**; **EP 3539689 A4 20200122**; CN 109922905 A 20190621; JP 2019535524 A 20191212; KR 101881971 B1 20180824; KR 20180051917 A 20180517; US 2019262895 A1 20190829; WO 2018088753 A1 20180517

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