Title (en)

CONTINUOUS CASTING DEVICE FOR STEEL

Title (de)

STRANGGUSSVORRICHTUNG FÜR STAHL

Title (fr)

DISPOSITIF DE COULÉE CONTINUE POUR ACIER

Publication

EP 2754513 A4 20150624 (EN)

Application

EP 11875560 A 20111109

Priority

JP 2011075868 W 20111109

Abstract (en)

[origin: EP2754513A1] A continuous casting apparatus for steel includes: a casting mold for casting a molten steel with a pair of long side walls and a pair of short side walls; a submerged entry nozzle which discharges the molten steel into the casting mold; and an electromagnetic stirring device which is disposed along each external surface of each of the long side walls and stirs an upper portion of the molten steel within the casting mold. A curved portion which is convexly curved toward the electromagnetic stirring device in plan view is formed at least at a position where the curved portion faces the submerged entry nozzle on each of the long side walls, and each of the long side walls including the curved portion has a uniform thickness. The shortest horizontal distance between a top which is a most depressed position when an internal surface of the curved portion is seen in plan view and an outer peripheral surface of the submerged entry nozzle is 30 mm to 80 mm in a range from a lower end portion of the electromagnetic stirring device to a position higher than an upper end portion thereof by 50 mm when viewed along a vertical direction.

IPC 8 full level

B22D 11/041 (2006.01); **B22D 11/10** (2006.01); **B22D 11/11** (2006.01); **B22D 11/115** (2006.01)

CPC (source: EP US)

B22D 11/041 (2013.01 - EP US); **B22D 11/10** (2013.01 - EP US); **B22D 11/115** (2013.01 - EP US)

Citation (search report)

- [Y] EP 2361703 A1 20110831 - NIPPON STEEL CORP [JP]
- [Y] JP H10193067 A 19980728 - NIPPON KOKAN KK
- See references of WO 2013069121A1

Cited by

CN108500228A

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

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EP 2754513 A1 20140716; **EP 2754513 A4 20150624**; **EP 2754513 B1 20181010**; BR 112014005417 A2 20170404; BR 112014005417 B1 20190702; CA 2844450 A1 20130516; CA 2844450 C 20170815; CN 103781572 A 20140507; CN 103781572 B 20160907; ES 2695045 T3 20181228; KR 20140053279 A 20140507; PL 2754513 T3 20190329; US 2014190655 A1 20140710; WO 2013069121 A1 20130516

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