Title (en)

CONTINUOUS CASTING METHOD FOR MOLTEN METAL

Title (de)

STRANGGUSSVERFAHREN FÜR GESCHMOLZENES METALL

Title (fr)

PROCÉDÉ DE COULÉE CONTINUE POUR MÉTAL LIQUIDE

Publication

EP 2497585 A4 20161221 (EN)

Application

EP 10828046 A 20101001

Priority

- JP 2009255222 A 20091106
- JP 2010005916 W 20101001

Abstract (en)

[origin: EP2497585A1] Provided is a continuous casting method of molten metal in which a hollow cylindrical, conical or truncated cone type refractory-made structure having one or more side holes in the sidewall thereof is disposed in a tundish above a submerged entry nozzle with the central axis of the refractory-made structure aligned vertically to supply molten metal from the tundish to the submerged entry nozzle, wherein an angle ¸1 is formed between a virtual line extending radially from the center of a horizontal circular cross-section of the refractory-made structure and the central axis of the side hole; molten metal in the tundish is passed through the side holes, whereby a swirling flow is generated in the molten metal to be supplied into the submerged entry nozzle; and the flow rate Q of the molten metal, the total opening areas S of the side holes, the mean inner radius R of horizontal circular cross-section in the region having openings of side holes, and the angle ¸1, in combination, satisfy 0.015 m 2 /s#¤ R×Q/S×Sin¸1#¤ 0.100 m 2 /s. A swirling flow mechanism is provided in the tundish, whereby the flow of molten metal in the mold can be stabilized.

IPC 8 full level

B22D 11/10 (2006.01); **B22D 41/50** (2006.01)

CPC (source: EP KR)

B22D 11/10 (2013.01 - EP KR); **B22D 11/103** (2013.01 - EP); **B22D 41/08** (2013.01 - EP); **B22D 41/507** (2013.01 - EP)

Citation (search report)

- [A] JP 2008030069 A 20080214 - SUMITOMO METAL IND
- [AD] JP 2007069236 A 20070322 - SUMITOMO METAL IND
- [A] JP S632540 A 19880107 - NIPPON KOKAN KK
- See references of WO 2011055484A1

Cited by

CN106312033A; US10456832B2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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