Title (en)

CONTINUOUS CASTING METHOD FOR STEEL

Title (de)

STRANGGIESSVERFAHREN FÜR STAHL

Title (fr)

PROCÉDÉ DE COULÉE CONTINUE DESTINÉ À L'ACIER

Publication

EP 3597328 B1 20211117 (EN)

Application

EP 17906929 A 20170425

Priority

JP 2017016326 W 20170425

Abstract (en)

[origin: EP3597328A1] In a continuous casting method including applying an AC magnetic field to in-mold molten steel, thereby creating a swirling and stirring flow in the in-mold molten steel, an appropriate AC magnetic flux density is provided in accordance with the submergence depth of a submerged entry nozzle and the distance from the surface of the in-mold molten steel to the location of the peak of the AC magnetic field to produce a high-quality strand.A continuous steel casting method according to the present invention is a continuous steel casting method including applying an AC magnetic field to in-mold molten steel via AC magnetic field generation devices, thereby creating a horizontal swirling and stirring flow in the in-mold molten steel, each of the AC magnetic field generation devices being placed on a back surface of a corresponding one of a pair of mold long sides, the AC magnetic field generation devices facing each other. A spacing between the mold long sides that face each other is 200 to 300 mm, a submerged entry nozzle has two discharge ports, each of the discharge ports having a discharge angle within a range of 5° in a downward direction to 50° in a downward direction, the AC magnetic field has a frequency of 0.5 Hz or greater and 3.0 Hz or less, and, in accordance with a location of a peak of the AC magnetic field, a submergence depth of the submerged entry nozzle and a magnetic flux density at the location of the peak of the AC magnetic field generated by the AC magnetic field generation devices are controlled to be within a predetermined range.

IPC 8 full level

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CPC (source: EP KR)

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