

Title (en)
MOLDING DEVICE FOR CONTINUOUS CASTING EQUIPPED WITH STIRRING DEVICE

Title (de)
MIT EINEM RÜHRWERK AUSGESTATTETE STRANGGUSS-FORMVORRICHTUNG

Title (fr)
MOULE POUR LA COULÉE CONTINUE PRÉSENTANT UN DISPOSITIF AGITATEUR

Publication
EP 2594351 A1 20130522 (EN)

Application
EP 11806904 A 20110715

Priority
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• JP 2010162058 A 20100716
• JP 2011066223 W 20110715

Abstract (en)
There is provided a molding device for continuous casting equipped with an agitator which receives liquid-phase melt of a conductive material and from which a solid-phase cast product is taken out through the cooling of the melt. The molding device includes a casting mold and an agitator. The casting mold receives the liquid-phase melt from an inlet side and discharges the solid-phase cast product from an outlet side by cooling. The agitator is provided outside the casting mold, and includes an electrode unit and a magnetic field generation device. The electrode unit includes first electrodes positioned at the top and a second electrode positioned therebelow, and the magnetic field generation device includes a permanent magnet for applying a magnetic field to the liquid-phase melt. The first electrodes are provided so as to conduct electricity to the liquid-phase melt, and the second electrode is provided so as to conduct electricity to the solid-phase cast product. The first and second electrodes are adapted so as to conduct electricity in the vertical direction through the melt and the cast product provided therebetween. The magnetic field generation device is provided outside the casting mold and generates magnetic lines of force in a lateral direction so that the magnetic lines of force penetrate into the casting mold, reach the inside of the casting mold, and are applied to the melt in the lateral direction crossing the current.

IPC 8 full level
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Cited by
CN103624230A; EP2857121A4; US9364891B2; US10118221B2; US10464127B2; US10835954B2; US11383296B2

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