

Title (en)  
METHOD FOR REGULATING THE LEVEL OF THE CONTACT LINE OF THE FREE METAL SURFACE WITH THE INGOT MOULD IN A CONTINUOUS VERTICAL CASTING.

Title (de)  
VERFAHREN ZUM EINSTELLEN DER BERÜHRUNGSLINIE DER FREIEN METALLOBERFLÄCHE MIT DER GIESSFORM BEIM SENKRECHTSTRANGGIESSEN.

Title (fr)  
PROCEDE DE REGLAGE DU NIVEAU DE LA LIGNE DE CONTACT DE LA SURFACE LIBRE DU METAL AVEC LA LINGOTIERE DANS UNE COULEE VERTICALE CONTINUE.

Publication  
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Application  
**EP 85904639 A 19850918**

Priority  
FR 8414740 A 19840919

Abstract (en)  
[origin: US4807694A] In a continuous vertical casting operation carried out in a mould 3, a coil 7 applies a periodic magnetic field of variable strength whose direction is substantially parallel to the axis of the mould 3 to the liquid 5 as it solidifies, in order to regulate the level of the line of contact of the free surface of the metal 5 with the mould 3. The height of the contact of the metal with the mould can be reduced from h1 to h2 by applying the magnetic field, and the strength of the field is adjusted in dependence on the desired level. The procedure is used in casting semifinished metallurgical products, in particular in aluminium and its alloys, in which there is a wish to obtain a cortical region of zero thickness, a fine grain without the preliminary addition of refining agents, and an absence of pitting.

Abstract (fr)  
Procédé de réglage du niveau de la ligne de contact de la surface libre du métal avec la lingotière (3) dans une coulée verticale continue. L'invention consiste à appliquer au liquide en cours de solidification un champ magnétique périodique variable et de direction (9) sensiblement parallèle à l'axe de la lingotière (3) et à adapter l'intensité de ce champ en fonction du niveau souhaité. Elle trouve son application dans la coulée de semi-produits métallurgiques, notamment en aluminium et ses alliages tels que les alliages au lithium et dans lesquels on veut obtenir à la fois une zone corticale d'épaisseur nulle, un grain fin sans ajout préalable d'agents d'affinage et une absence de picots.

IPC 1-7  
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