

Title (en)

METHOD OF CASTING A METAL MELT IN THE PRESENCE OF A MAGNETIC FIELD

Title (de)

VERFAHREN ZUM VERGIESSEN EINER METALLSCHMELZE UNTER EINWIRKUNG EINES MAGNETFELDES

Title (fr)

PROCEDE POUR LA COULEE DE METAL FONDU SOUS L'INFLUENCE D'UN CHAMP MAGNETIQUE

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Application

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Abstract (en)

[origin: WO9944773A1] The invention relates to a method for casting a molten mass at a relatively low solidification rate, such as, in particular, gravity chill-cast methods, sand casting methods, low pressure casting methods or intermediate forms of these methods, whereby the molten mass has phases, such as the presettling of crystals, particles or short fibers, having a lower conductivity of electricity than the metal of the remaining molten mass. In order to obtain surface areas which are resistant to wear, the invention provides that the molten mass is solidified by at least the local effect of an electromagnetic alternating field and that, in the course of this, the electromagnetic alternating field penetrates into a surface area with a penetration depth according to the frequency of the alternating field and to the conductivity of the molten mass. As a result, the phases with lower conductibilities are enhanced on these surface areas of the cast part.

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