

Title (en)
METHOD OF CASTING AND CASTING APPARATUS

Title (de)
VERFAHREN ZUM GIESSEN UND GIESSVORRICHTUNG

Title (fr)
METHODE DE COULAGE ET APPAREIL DE COULAGE

Publication
EP 1859879 A4 20090304 (EN)

Application
EP 06729183 A 20060315

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• JP 2005072732 A 20050315

Abstract (en)
[origin: EP1859879A1] The present invention has an object of preventing segregation during the casting of Mg alloy or the like containing additive elements having a great difference of specific gravity to obtain a cast having a good quality. A casting mold 1 having a molten metal received therein is rotated in one direction by a rotary device 7 with the vertical axis as a rotary axis while solidifying the molten metal for a predetermined period of time, and, after the predetermined period of time is lapsed, the casting mold 1 is rotated in the direction opposite the direction of rotation for a predetermined period of time, and the rotation in the opposing directions is repeated so that the molten metal is solidified. The molten metal can be shaken and agitated without roughening the surface of the molten metal to uniformize the distribution of temperature of the molten metal in the casting mold. The production of segregates can be minimized and a fine homogenous structure can be obtained. Thus, a metallic material excellent in ductility and strength can be obtained.

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• [X] JP 2002331352 A 20021119 - MITSUBISHI MATERIALS CORP
• [XD] JP 2002331354 A 20021119 - MITSUBISHI MATERIALS CORP
• [X] EP 0293961 A1 19881207 - AE PLC [GB]
• [X] US 2116367 A 19380503 - SMITH EDWARD W
• [X] GB 1472288 A 19770504 - TUCHKEVICH N
• [X] JP S55126345 A 19800930 - KAWASAKI STEEL CO
• [DA] JP 2000343204 A 20001212 - HOWMET RES CORP
• See references of WO 2006098382A1

Cited by
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DE FR GB

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