

Title (en)
MAGNESIUM ALLOY FOR CASTING AND MAGNESIUM ALLOY CAST

Title (de)
MAGNESIUMLEGIERUNG FÜR GUSS UND MAGNESIUMLEGIERUNGSGUSS

Title (fr)
ALLIAGE DE MAGNÉSIUM POUR LA COULÉE ET PIÈCE COULÉE D'ALLIAGE DE MAGNÉSIUM

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Application
EP 08740690 A 20080414

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Abstract (en)
A magnesium alloy for casting according to the present invention is characterized in that , when the entirety is taken as 100% by mass, it includes copper (Cu) in an amount of from 1% by mass or more to 5% by mass or less, calcium (Ca) in an amount of from 0.1% by mass or more to 5% by mass or less, silver (Ag) in an amount of from 0.1% by mass or more to 5% by mass or less, and the balance comprising magnesium (Mg) and inevitable impurities. By means of including Cu and Ca, crystallized substances of Mg-Ca compounds crystallize in crystalline grain boundaries between Mg crystalline grains as three-dimensionally mesh shapes, along with Mg-Cu compounds. By means of the three-dimensionally mesh constructions, grain-boundary sliding, which becomes active especially when becoming high temperature, is suppressed, and thereby high-temperature strength and creep resistance at high temperature improve. Moreover, by means of the Ag addition, the Mg crystalline grains become micro-fine and thereby the three-dimensionally mesh constructions, whose continuities are high and which are fine, are formed. In addition, it is less likely that Ag affects the heat conductivity of magnesium alloy adversely.

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