

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

Publication

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Application

EP 08740692 A 20080414

Priority

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- JP 2007112014 A 20070420

Abstract (en)

Amagnesiumalloy 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, tin (Sn) in an amount of from 0.1 or more to 3 or less by mass ratio with respect to the Ca (Sn/Ca); and the balance comprising magnesium (Mg) and inevitable impurities. By means of including Cu, Ca and Sn, crystallized substances of Mg-Ca-Sn compounds crystallize in crystalline grain boundaries between Mg crystalline grains as network shapes (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, since Sn forms compounds with Ca preferentially, it influence less on the heat conductivity, compared with the other additive elements.

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Cited by

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