

Title (en)

METHOD FOR PRODUCING A WEAR-RESISTANT ALUMINUM ALLOY, AN ALUMINUM ALLOY OBTAINED ACCORDING TO THE METHOD, AND USE THEREOF

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER VERSCHLEISSBESTÄNDIGEN ALUMINIUMLEGIERUNG, NACH DEM VERFAHREN ERHALTENE ALUMINIUMLEGIERUNG UND DEREN VERWENDUNG

Title (fr)

PROCEDE POUR PRODUIRE UN ALLIAGE D'ALUMINIUM RESISTANT A L'USURE, ALLIAGE D'ALUMINIUM OBTENU SELON CE PROCEDE ET SON UTILISATION

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Application

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Abstract (en)

[origin: WO2007039340A1] The invention relates to a method for producing a wear-resistant aluminum alloy, to an aluminum alloy produced according to the method, and to the use thereof. The method comprises the steps: (i) preparing an aluminum of the following composition: Fe: 3 - 10; X: 3 - 10; Y: 0 - 1,5; Z: 0 - 10, wherein X represents an element or a combination of elements: (a) V and Si; (b) Cr and Ti; (c) Ce, or; (d) Mn, with the provision that: the proportion of the individual elements in the combinations of elements (a) and (b) is equal to at least 0.5 % by weight; Y represents one or more grain refining elements selected from the group consisting of B, Ce, Sr, Sc, Mg, Nb, Mn and Zr provided that these are not provided as X; Z represents one or more additives, which increase a heat resistance and which is selected from the group of ceramic fibers, particles and platelets, and; the indications of % by weight refer to the alloy, and production-related impurities represent the remaining proportion of the alloy to total 100 % by weight, with the provision that the proportion of Al of the alloy is at least 80 % by weight; (ii) melting the aluminum alloy, dissolving and homogenizing the alloy elements at temperatures ranging from 650 °C to 1000 °C, and; (iii) pouring the melt into a casting mold at a casting temperature that, initially, is close to a melting temperature of the alloy and increases to a temperature of 150° higher than the melting temperature.

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See references of WO 2007039340A1

Cited by

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