

Title (en)

ALLOY MATERIAL AND PRODUCTION PROCESS THEREFOR

Title (de)

LEGIERUNGSMATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

MATÉRIAU EN ALLIAGE ET PROCÉDÉ DE PRODUCTION ASSOCIÉ

Publication

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Application

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Abstract (en)

[origin: US2021340649A1] The present invention discloses an alloy material and a manufacturing process of its bars. The technical solution of the present invention is: an alloy material, wherein it comprises, in mass %: Si, 0.8-1.2%; Fe, 0-0.5%; Cu, 0.15-0.6%; Mn, 0.2-0.8%; Mg, 0.6-0.1%; Cr, 0-0.1%; Zn, 0-0.25%; Ti, 0-0.1%; the balance is Al. The Si content is 1.11%. The Mn content is 0.69%. A manufacturing process of an alloy material, wherein it comprises the following steps: (1) Weighing the raw material of each component by mass percentage; (2) Placing the raw material in a melting furnace and smelt it into an alloy liquid, until the temperature of the alloy liquid reaches 705-750° C., keeping for 45-60 minutes; (3) After the alloy liquid temperature falls to 520-580° C., add refining agent, heat up to 670-710° C., and carry out composition inspection; (4). After the alloy liquid is cooled down to 650-660° C. by holding, it is poured into molds where the bars are formed by cooling. According to the solution provided by the invention, the alloy has high tensile strength and yield strength.

IPC 8 full level

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Citation (search report)

- [X1] CN 106967894 A 20170721 - UNIV GUANGXI
- [X1] EP 0679199 B1 19990602 - PECHINEY RHENALU [FR]
- [X1] JP 2018070947 A 20180510 - KOBE STEEL LTD
- [X1] US 2015152536 A1 20150604 - KUDO TOMOYUKI [JP], et al
- See references of WO 2020224627A1

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