Title (en)

METHOD FOR MANUFACTURING 6XXX ALLOY MATERIALS FOR VACUUM CHAMBERS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON 6XXX-LEGIERUNGSMATERIALIEN FÜR VAKUUMKAMMERN

Title (fr)

PROCÉDÉ DE FABRICATION DE PRODUITS EN ALLIAGE 6XXX POUR CHAMBRES À VIDE

Publication

EP 2526216 A1 20121128 (FR)

Application

EP 11706295 A 20110118

Priority

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Abstract (en)

[origin: WO2011089337A1] The invention relates to a method for manufacturing an aluminum block having a thickness at least equal to 250 mm and intended for manufacturing elements for vacuum chambers. Said method involves the following consecutive steps: semi-continuous casting of an alloy block having a composition such that, in wt%, Si is between 0.5 and 1.5, Mg is between 0.5 and 1.5, Fe < 0.3, Cu < 0.2, Mn < 0.8, Cr < 0.10, Ti < 0.15, each other element is less than 0.05, and a total of 0.15 remains aluminum; solution heat treatment is carried out, at a temperature between 450° and 560° C, directly on the cast block that is possibly made uniform; the resulting solution heat-treated block is quenched with the speed for cooling, between the solution temperature and 200° C, being at least 200° C/h; and tempering is carried out on the thus-quenched and possibly de-tensioned block. The resulting blocks are particularly advantageous in creating vacuum chambers for the manufacture of semiconductor-based integrated electronic circuits, flat display screens, and photovoltaic panels.

IPC 8 full level

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