

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

- US 29659310 P 20100120
- FR 1000212 A 20100120
- FR 2011000029 W 20110118

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

**C22C 21/02** (2006.01); **B01J 3/00** (2006.01); **C22C 21/08** (2006.01); **C22F 1/05** (2006.01)

CPC (source: EP US)

**C22C 21/02** (2013.01 - EP US); **C22C 21/08** (2013.01 - EP US); **C22F 1/05** (2013.01 - EP US)

Citation (search report)

See references of WO 2011089337A1

Cited by

CN111531135A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**FR 2955336 A1 20110722**; **FR 2955336 B1 20130215**; EP 2526216 A1 20121128; EP 2526216 B1 20161019; JP 2013517383 A 20130516; US 2012325381 A1 20121227; WO 2011089337 A1 20110728

DOCDB simple family (application)

**FR 1000212 A 20100120**; EP 11706295 A 20110118; FR 2011000029 W 20110118; JP 2012549394 A 20110118; US 201113522940 A 20110119