

Title (en)

Precipitation hardening of an aluminium alloy

Title (de)

Ausscheidungshärten einer Aluminiumlegierung

Title (fr)

Durcissement par précipitation d'un alliage d'aluminium

Publication

EP 1195449 A3 20031217 (DE)

Application

EP 01890265 A 20010913

Priority

AT 15632000 A 20000914

Abstract (en)

[origin: EP1195449A2] Three-stage heating and cooling pretreatment, finally stabilizing the grain structure under reducing temperature, for at least 420 hrs, preferably for 1000 hrs, produces stabilized grain structure with good mechanical properties: hardness HB up to 65 (2.5/62.5/16); limiting expansion Rp0.2 up to 140 MPa, preferably 130 MPa; tensile strength Rm up to 270 MPa, preferably 240 MPa; and uniform expansion before area reduction exceeding 18%. If appropriate, after extraction of the component from the mold, it is precipitation-hardened at a temperature of 165 degrees C-190 degrees C, over an interval of 12-38 M.

IPC 1-7

C22F 1/05; C22C 21/08

IPC 8 full level

C22F 1/04 (2006.01)

CPC (source: EP)

C22F 1/04 (2013.01)

Citation (search report)

- [Y] EP 0801141 A1 19971015 - HOOGOVENS ALUMINIUM NV [BE]
- [Y] EP 0480402 A1 19920415 - SUMITOMO LIGHT METAL IND [JP]
- [A] US 5728241 A 19980317 - GUPTA ALOK KUMAR [CA], et al
- [A] US 5718780 A 19980217 - BRYANT J DANIEL [US], et al
- [A] WO 9607768 A1 19960314 - ALCAN INT LTD [CA], et al
- [A] US 3135633 A 19640602 - CLAUDE HORNUS JEAN
- [X] J.R.DAVIS: "Metals Handbook - Desk Edition", 1998, ASM INTERNATIONAL, MATERIALS PARK OHIO, XP002255218

Cited by

EP2789707A1; US10538834B2; US8728258B2; US11932928B2; US10513766B2; US11920229B2

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