

Title (en)

Ceracon forging of L1(sub 2) aluminum alloys

Title (de)

Ceracon-Schmieden von L1(sub 2)-Aluminiumlegierungen

Title (fr)

Forgeage de Ceracon d'alliages d'aluminium L1(sub 2)

Publication

EP 2239071 A3 20160810 (EN)

Application

EP 10250569 A 20100325

Priority

US 41967709 A 20090407

Abstract (en)

[origin: EP2239071A2] A method for producing high strength aluminum alloy consolidated billets containing L1 2 dispersoids by Ceracon forging is disclosed. The method comprises forming an aluminum alloy powder compact preform containing L1 2 dispersoid forming elements therein and encompassing the preform in a flowable pressure transmitting medium in a die in a hydraulic press. The die, pressure transmitting medium and preform are then heated and the preform is forged by applying pressure to the pressure transmitting medium by the ram of the hydraulic press. The unequal axial and radial strain resulting from this type of forging results in improved mechanical properties of L1 2 aluminum alloys.

IPC 8 full level

B22F 3/17 (2006.01); **C22C 1/04** (2006.01)

CPC (source: EP US)

B22F 3/17 (2013.01 - EP US); **C22C 1/0416** (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

Citation (search report)

- [XDY] US 2006269437 A1 20061130 - PANDEY AWADH B [US]
- [YDA] US 2005147520 A1 20050707 - CANZONA GUIDO [US]
- [XAY] US 5330704 A 19940719 - GILMAN PAUL S [US]
- [XA] EP 1726671 A2 20061129 - HONEYWELL INT INC [US]
- [AD] US 6248453 B1 20010619 - WATSON THOMAS J [US]
- [A] US 2004065173 A1 20040408 - FRITZEMEIER LESLIE G [US], et al
- [A] US 5061323 A 19911029 - DELUCCIA JOHN J [US]
- [YA] SIA NEMAT-NASSER ET AL: "Dynamic response of conventional and hot isostatically pressed Ti-6Al-4V alloys: experiments and modeling", MECHANICS OF MATERIALS, vol. 33, no. 8, 1 August 2001 (2001-08-01), NL, pages 425 - 439, XP055282948, ISSN: 0167-6636, DOI: 10.1016/S0167-6636(01)00063-1

Cited by

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Designated contracting state (EPC)

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 SE SI SK SM TR

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DOCDB simple family (publication)

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