

Title (en)
Direct extrusion of shapes with L12 aluminum alloys

Title (de)
Direkt-Strangpressen von Formen mit L12-Aluminiumlegierungen

Title (fr)
Extrusion directe de formes avec des alliages d'aluminium L12

Publication
EP 2295609 A1 20110316 (EN)

Application
EP 10251602 A 20100915

Priority
US 56000009 A 20090915

Abstract (en)
A method for producing a high strength aluminum alloy brackets, cases, tubes, ducts, beams, spars and other parts containing L1 2 dispersoids from an aluminum alloy powder containing the L1 2 dispersoids. The powder is consolidated into a billet having a density of about 100 percent. The billet is extruded using an extrusion die shaped to produce the component.

IPC 8 full level
C22C 1/04 (2006.01); **B22F 3/20** (2006.01); **C22C 21/00** (2006.01)

CPC (source: EP US)
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C22C 21/06 (2013.01 - EP US); **C22C 21/10** (2013.01 - EP US); **C22C 21/12** (2013.01 - EP US); **B22F 2003/145** (2013.01 - EP US);
B22F 2998/10 (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

C-Set (source: EP US)
1. **B22F 2998/10 + B22F 9/082 + B22F 3/1216 + B22F 3/14 + B22F 3/20**
2. **B22F 2999/00 + B22F 3/1216 + B22F 2201/20**

Citation (applicant)
• US 6248453 B1 20010619 - WATSON THOMAS J [US]
• US 2006269437 A1 20061130 - PANDEY AWADH B [US]
• R. GERMAIN: "Powder Metallurgy Science", 1994, pages: 101

Citation (search report)
• [XY] EP 1728881 A2 20061206 - UNITED TECHNOLOGIES CORP [US]
• [XY] EP 1111078 A2 20010627 - UNITED TECHNOLOGIES CORP [US]
• [X] EP 1439239 A1 20040721 - UNITED TECHNOLOGIES CORP [US]
• [X] EP 1788102 A1 20070523 - UNITED TECHNOLOGIES CORP [US]
• [E] EP 2251447 A1 20101117 - UNITED TECHNOLOGIES CORP [US]
• [XP] EP 2110450 A1 20091021 - UNITED TECHNOLOGIES CORP [US]
• [XP] US 2010143177 A1 20100610 - PANDEY AWADH B [US]
• [XP] WO 2010102206 A2 20100910 - UNITED TECHNOLOGIES CORP [US], et al
• [A] US 4834942 A 19890530 - FRAZIER WILLIAM E [US], et al
• [A] US 4834810 A 19890530 - BENN RAYMOND C [US], et al

Cited by
CN108866460A; CN110983127A; EP3290136A1; CN107252889A

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 SE SI SK SM TR

Designated extension state (EPC)
BA ME RS

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EP 10251602 A 20100915; US 201313925988 A 20130625; US 56000009 A 20090915