

Title (en)
METHOD FOR FORMING AN ALUMINUM ALLOY SHEET PART

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES TEILS AUS ALUMINIUMLEGIERUNGSBLECH

Title (fr)
PROCÉDÉ DE FORMATION D'UNE PIÈCE EN FEUILLE D'ALLIAGE D'ALUMINIUM

Publication
EP 3750646 A4 20211020 (EN)

Application
EP 19750662 A 20190124

Priority
• CN 201810125359 A 20180207
• CN 2019072949 W 20190124

Abstract (en)
[origin: EP3750646A1] Disclosed is a method for moulding an aluminium alloy sheet part, comprising: i) heating an aluminium alloy sheet material to a solid solution temperature window range for solid solution treatment; ii) transferring the solid solution-treated aluminium alloy sheet material into a mould; iii) closing the mould, and moulding with the mould being closed for 0.5 s or more; and iv) cooling the mould to cool a moulded part. The moulding method is particularly suitable for moulding parts with complex shapes and does not need continuous annealing treatment, thereby quite reducing the material cost. Moreover, the moldability of the material at a high temperature is multiplied, the resilient modulus is low, the number of subsequent part moulding processes is reduced, and the loss of raw materials is reduced.

IPC 8 full level
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CPC (source: CN EP)
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C22F 1/04 (2013.01 - CN EP)

Citation (search report)
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• [X] US 2012073347 A1 20120329 - LUCKEY GEORGE S [US], et al
• [X] MENDIGUREN J ET AL: "Hot stamping of AA7075 aluminum sheets", IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING, vol. 159, 30 November 2016 (2016-11-30), GB, pages 012026, XP055838937, ISSN: 1757-8981, Retrieved from the Internet <URL:http://stacks.iop.org/1757-899X/159/i=1/a=012026?key=crossref.484fc3f587966cdaf6589281b83a2057> DOI: 10.1088/1757-899X/159/1/012026
• [X] LIU YONG ET AL: "Formability and lubrication of a B-pillar in hot stamping with 6061 and 7075 aluminum alloy sheets", PROCEDIA ENGINEERING, vol. 207, 22 September 2017 (2017-09-22), pages 723 - 728, XP085261407, ISSN: 1877-7058, DOI: 10.1016/J.PROENG.2017.10.819
• See references of WO 2019154094A1

Designated contracting state (EPC)
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