

Title (en)

METHOD FOR PRODUCING AN ALUMINIUM ALLOY PART IMPLEMENTING AN ADDITIVE MANUFACTURING TECHNIQUE WITH PREHEATING

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES ALUMINIUMLEGIERUNGSTEILS UNTER IMPLEMENTIERUNG EINER TECHNIK ZUR GENERATIVEN FERTIGUNG MIT VORWÄRMUNG

Title (fr)

PROCEDE DE FABRICATION D'UNE PIECE EN ALLIAGE D'ALUMINIUM METTANT EN OEUVRE UNE TECHNIQUE DE FABRICATION ADDITIVE AVEC PRECHAUFFAGE

Publication

**EP 4347157 A1 20240410 (FR)**

Application

**EP 22733191 A 20220524**

Priority

- FR 2105626 A 20210528
- FR 2022050981 W 20220524

Abstract (en)

[origin: WO2022208037A1] Disclosed is a method for producing a part (20) comprising a formation of successive metal layers (201...20n), said layers being stacked on each other and each being formed by depositing an aluminium alloy (15), the aluminium alloy being subjected to an input of energy so as to become molten and, on solidifying, to form said layer, the method being characterised in that: - during production of the part, prior to the formation of each layer, the aluminium alloy powder is maintained at a temperature no lower than 25°C and below 160°C or between 300°C and 500°C; - the method comprises post-fabrication heat treatment applied to the part at a temperature between 300°C and 400°C; - post-fabrication heat treatment begins with an increase in temperature, the increase being implemented at a rate higher than 5°C per minute; - the method does not comprise dipping in solution followed by hardening.

IPC 8 full level

**B22F 10/28** (2021.01); **B22F 10/362** (2021.01); **B22F 10/64** (2021.01); **B33Y 10/00** (2015.01); **B33Y 70/00** (2020.01); **B33Y 80/00** (2015.01); **C22C 1/04** (2023.01); **C22C 21/00** (2006.01)

CPC (source: EP KR US)

**B22F 10/28** (2021.01 - EP KR US); **B22F 10/362** (2021.01 - KR); **B22F 10/64** (2021.01 - EP KR); **B22F 12/13** (2021.01 - US); **B22F 12/17** (2021.01 - EP); **B33Y 10/00** (2014.12 - EP KR); **B33Y 40/20** (2020.01 - KR); **B33Y 70/00** (2014.12 - EP KR); **B33Y 80/00** (2014.12 - EP); **C22C 1/0416** (2013.01 - EP); **C22C 21/00** (2013.01 - EP); **C22F 1/04** (2013.01 - EP); **B22F 1/05** (2022.01 - EP); **B22F 1/065** (2022.01 - EP); **B22F 2301/052** (2013.01 - KR US); **B22F 2999/00** (2013.01 - EP US); **B33Y 10/00** (2014.12 - US); **B33Y 40/10** (2020.01 - US); **B33Y 40/20** (2020.01 - US); **B33Y 70/00** (2014.12 - US); **Y02P 10/25** (2015.11 - EP)

C-Set (source: EP)

**B22F 2999/00** + **B22F 12/17** + **B22F 12/13**

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

Designated extension state (EPC)

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Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

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DOCDB simple family (application)

**FR 2022050981 W 20220524**; CA 3219536 A 20220524; CN 202280038119 A 20220524; DE 22733191 T 20220524; EP 22733191 A 20220524; FR 2105626 A 20210528; JP 2023573046 A 20220524; KR 20237045059 A 20220524; US 202218562746 A 20220524