

Title (en)  
METHOD FOR MANUFACTURING A COMPONENT BY MEANS OF LAYERED CONSTRUCTION

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES BAUTEILS DURCH SCHICHTAUFBAU

Title (fr)  
PROCÉDÉ DE FABRICATION D'UN COMPOSANT PAR FORMATION DE COUCHES

Publication  
**EP 4351821 A1 20240417 (DE)**

Application  
**EP 22732482 A 20220602**

Priority  
• DE 102021114560 A 20210607  
• EP 2022065009 W 20220602

Abstract (en)  
[origin: WO2022258475A1] The invention relates to a method for manufacturing a component (1) by means of layered construction, by combining a plurality of crystallites of a metal material to form a single crystal. The single crystal is produced by means of thermomechanically activated successive anisotropic plastic deformation. The metal material is heated during the construction of a new layer so that the metal material is melted in a line-shaped region (2). The line-shaped region (2) is moved in order to construct the new layer.

IPC 8 full level  
**B22F 10/28** (2021.01); **B22F 10/25** (2021.01); **B22F 10/36** (2021.01); **B22F 10/364** (2021.01); **B22F 10/38** (2021.01); **B22F 12/13** (2021.01); **B22F 12/44** (2021.01); **B22F 12/45** (2021.01); **B23K 26/06** (2014.01); **B23K 26/073** (2006.01); **B23K 26/342** (2014.01); **B23P 6/00** (2006.01); **B33Y 10/00** (2015.01); **B33Y 80/00** (2015.01); **C22C 1/04** (2023.01)

CPC (source: EP)  
**B22F 10/25** (2021.01); **B22F 10/28** (2021.01); **B22F 10/36** (2021.01); **B22F 10/364** (2021.01); **B22F 10/38** (2021.01); **B22F 12/13** (2021.01); **B22F 12/44** (2021.01); **B22F 12/45** (2021.01); **B23K 26/0006** (2013.01); **B23K 26/0732** (2013.01); **B23K 26/0738** (2013.01); **B23K 26/342** (2015.10); **B23P 6/007** (2013.01); **B33Y 10/00** (2014.12); **B33Y 80/00** (2014.12); **C22C 1/0433** (2013.01); **C22C 1/0458** (2013.01); **C30B 11/003** (2013.01); **C30B 11/005** (2013.01); **C30B 29/52** (2013.01); **B22F 2999/00** (2013.01); **B23K 2103/12** (2018.08); **B23K 2103/26** (2018.08); **C22C 2200/00** (2013.01)

C-Set (source: EP)  
**B22F 2999/00 + B22F 10/36 + B22F 2203/05 + B22F 2203/11 + C22C 2200/00**

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)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**DE 102021114560 A1 20221208**; EP 4351821 A1 20240417; WO 2022258475 A1 20221215

DOCDB simple family (application)  
**DE 102021114560 A 20210607**; EP 2022065009 W 20220602; EP 22732482 A 20220602