

Title (en)

METHOD FOR PRODUCING A TREATED, 3D PRINTED OBJECT

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES BEHANDELTEN, 3D-GEDRUCKTEN GEGENSTANDS

Title (fr)

PROCÉDÉ POUR FABRIQUER UN OBJET IMPRIMÉ EN 3D TRAITÉ

Publication

EP 3727801 A1 20201028 (DE)

Application

EP 18816133 A 20181218

Priority

- EP 17208280 A 20171219
- EP 2018085547 W 20181218

Abstract (en)

[origin: WO2019121718A1] The present invention relates to a method for producing a treated object, comprising the steps of: applying a layer of particles to a target area; applying a liquid binder to a selected portion of the layer in accordance with a cross-section of the object, so that the particles in the selected portion are bonded; repeating the steps of applying a layer of particles and applying a binder for a plurality of layers so that the bonded portions of the adjacent layers are bonded to form an object, wherein at least a part of the particles comprises a meltable polymer. A binder which cures by cross-linking is preferably selected as the binder. The obtained object is at least partially contacted with a liquid heated to $\geq T$ or with a powder bed heated to $\geq T$ in order to obtain the treated object. T represents a temperature of $\geq 25^{\circ}\text{C}$, the liquid does not represent a solvent or a reaction partner for the binder present in the object and the meltable polymer, and the powder bed is different from the particles of the meltable polymer. The invention also relates to a treated object that can be obtained by the method according to the invention.

IPC 8 full level

B29C 64/165 (2017.01); **B22F 1/105** (2022.01); **B29C 64/30** (2017.01); **B33Y 40/00** (2020.01); **B33Y 80/00** (2015.01)

CPC (source: EP US)

B22F 1/105 (2022.01 - EP US); **B22F 10/14** (2021.01 - EP US); **B29C 64/165** (2017.07 - EP US); **B29C 64/30** (2017.07 - EP US);
B29C 71/02 (2013.01 - EP US); **B33Y 40/20** (2020.01 - EP US); **B33Y 80/00** (2014.12 - EP); **B22F 10/38** (2021.01 - EP US);
B22F 10/62 (2021.01 - EP US); **B22F 2302/253** (2013.01 - US); **B22F 2302/256** (2013.01 - US); **B29C 2071/027** (2013.01 - EP US);
B33Y 10/00 (2014.12 - US); **Y02P 10/25** (2015.11 - EP)

Citation (search report)

See references of WO 2019121718A1

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

DOCDB simple family (publication)

WO 2019121718 A1 20190627; CN 111465482 A 20200728; EP 3727801 A1 20201028; US 11833749 B2 20231205;
US 2020306829 A1 20201001

DOCDB simple family (application)

EP 2018085547 W 20181218; CN 201880081200 A 20181218; EP 18816133 A 20181218; US 201816763591 A 20181218