

Title (en)

METHOD FOR ADDITIVELY MANUFACTURING THREE-DIMENSIONAL COMPONENTS AND CORRESPONDING DEVICE

Title (de)

VERFAHREN ZUR ADDITIVEN FERTIGUNG DREIDIMENSIONALER BAUTEILE SOWIE ENTSPRECHENDE VORRICHTUNG

Title (fr)

PROCÉDÉ DE PRODUCTION ADDITIVE DE COMPOSANTS TRIDIMENSIONNELS, ET DISPOSITIF CORRESPONDANT

Publication

**EP 3972762 A1 20220330 (DE)**

Application

**EP 20728699 A 20200522**

Priority

- DE 102019113841 A 20190523
- EP 2020064263 W 20200522

Abstract (en)

[origin: WO2020234446A1] The invention relates to a method for additively manufacturing three-dimensional components via the layer-by-layer application of a construction material and locally selective solidifying of the construction material using at least one beam (15) impinging the construction material and following a feed direction (12), wherein an irradiation path (10) of the impinging beam deviates from a, in particular straight, feed centre line M during the feed movement, wherein at least one line P parallel to M or corresponding with M is successively crossed over by the irradiation path (10) at three points P1, P2, P3, such that the following applies: P2 is further forward in the feed direction than P1 and P3 lies between P1 and P2, at a distance p1 from P1 and a distance p2 from P2, wherein  $p2/p1 \geq 2.0$ , preferably  $p2/p1 \geq 3.5$ .

IPC 8 full level

**B22F 3/105** (2006.01); **B23K 26/073** (2006.01); **B23K 26/082** (2014.01); **B23K 26/342** (2014.01); **B29C 64/153** (2017.01); **B29C 64/268** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01); **B33Y 50/02** (2015.01)

CPC (source: CN EP US)

**B22F 10/28** (2021.01 - CN EP US); **B22F 10/36** (2021.01 - CN EP US); **B22F 10/366** (2021.01 - CN US); **B22F 12/41** (2021.01 - CN); **B22F 12/46** (2021.01 - CN EP US); **B22F 12/49** (2021.01 - US); **B23K 26/082** (2015.10 - EP US); **B23K 26/342** (2015.10 - EP); **B28B 1/001** (2013.01 - CN); **B29C 64/153** (2017.08 - CN EP); **B29C 64/268** (2017.08 - CN EP); **B29C 64/393** (2017.08 - CN EP); **B33Y 10/00** (2014.12 - CN EP US); **B33Y 30/00** (2014.12 - CN EP US); **B33Y 50/02** (2014.12 - CN EP); **B22F 10/85** (2021.01 - US); **B33Y 50/02** (2014.12 - US); **Y02P 10/25** (2015.11 - EP)

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)

**DE 102019113841 A1 20201126**; CN 113853292 A 20211228; CN 113853292 B 20240507; EP 3972762 A1 20220330; US 2022305561 A1 20220929; WO 2020234446 A1 20201126

DOCDB simple family (application)

**DE 102019113841 A 20190523**; CN 202080037678 A 20200522; EP 2020064263 W 20200522; EP 20728699 A 20200522; US 202017594883 A 20200522