

Title (en)

PROCESS FOR MANUFACTURING A PART BY LOCAL IRRADIATION OF A MATERIAL BY AT LEAST TWO CONVERGING BEAMS

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES BAUTEILS DURCH LOKALE BESTRAHLUNG EINES MATERIALS DURCH MINDESTENS ZWEI KONVERGIERENDE STRAHLEN

Title (fr)

PROCEDE DE FABRICATION D'UNE PIECE PAR IRRADIATION LOCALISEE D'UN MATERIAU PAR CONCOURANCE D'AU MOINS DEUX FAISCEAUX

Publication

**EP 3938131 A1 20220119 (FR)**

Application

**EP 20714658 A 20200403**

Priority

- FR 1904035 A 20190416
- EP 2020059578 W 20200403

Abstract (en)

[origin: WO2020212171A1] Manufacturing of a part by local irradiation of a material that can be sintered, melted or photopolymerized, by: providing a volume (1) of the material for manufacturing the part and compressing said volume (1) by applying a pressure; defining, in said volume (1), a plurality of different target volumes (4; 4'), the combined target volumes defining the part to be manufactured; for each target volume (4; 4'), maintaining the pressure applied to the volume (1) and simultaneously irradiating the target volume with at least two continuous beams (2) that converge in the target volume; releasing the obtained part from the rest of non-irradiated material. The material is partially transparent to said beams; the energy applied to the target volume by each beam is greater than E<sub>threshold</sub>, the sum of the energies applied to the target volume by each of the beams is greater than or equal to E<sub>transformation threshold</sub>.

IPC 8 full level

**B22F 3/105** (2006.01); **B29C 64/106** (2017.01); **B29C 64/135** (2017.01); **B29C 64/141** (2017.01); **B29C 64/153** (2017.01); **B29C 64/268** (2017.01); **B29C 64/282** (2017.01); **B33Y 10/00** (2015.01); **C22C 1/04** (2006.01)

CPC (source: EP US)

**B22F 10/28** (2021.01 - US); **B22F 12/45** (2021.01 - US); **B28B 1/001** (2013.01 - US); **B29C 64/135** (2017.07 - EP); **B29C 64/153** (2017.07 - EP US); **B29C 64/268** (2017.07 - EP US); **B29C 64/282** (2017.07 - EP US); **B33Y 10/00** (2014.12 - EP US); **B22F 2999/00** (2013.01 - EP); **C22C 1/0433** (2013.01 - EP); **C22C 1/0458** (2013.01 - EP); **Y02P 10/25** (2015.11 - EP)

Citation (search report)

See references of WO 2020212171A1

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 2020212171 A1 20201022**; CN 113727793 A 20211130; EP 3938131 A1 20220119; FR 3095143 A1 20201023; FR 3095143 B1 20211217; US 2022194005 A1 20220623

DOCDB simple family (application)

**EP 2020059578 W 20200403**; CN 202080029295 A 20200403; EP 20714658 A 20200403; FR 1904035 A 20190416; US 202017603638 A 20200403