

Title (en)

ADDITIVE MANUFACTURING METHOD FOR CONTINUOUSLY PRODUCING MOULDED BODIES, AND CORRESPONDING APPARATUS

Title (de)

ADDITIVES FERTIGUNGSVERFAHREN ZUM KONTINUIERLICHEN HERSTELLEN VON FORMKÖRPERN UND ENTSPRECHENDE VORRICHTUNG

Title (fr)

PROCÉDÉ DE FABRICATION ADDITIVE POUR LA FABRICATION CONTINUE DE CORPS MIS EN FORME ET DISPOSITIF CORRESPONDANT

Publication

EP 4143011 A1 20230308 (DE)

Application

EP 21754793 A 20210803

Priority

- EP 20192167 A 20200821
- EP 2021071633 W 20210803

Abstract (en)

[origin: WO2022037933A1] The invention relates to an apparatus (100) for continuously producing moulded bodies (K1-K7) by means of an additive manufacturing method. The apparatus (100) comprises a processing region (2) and a separation device (3). The processing region (2) is designed to receive a powder, wherein a layer-by-layer processing of at least part of the powder to form moulded bodies (K1-K7) can be performed in the processing region (2) by means of the additive manufacturing process. The separation device (3) comprises at least one separation element (31a, 32a), which can be or is introduced into the processing region (2) in such a way that chambers (21, 22) are formed in the processing region (2). The separation device (3) has a drive (33) which is designed to move the at least one separation element (31a, 32a) in such a way that the chambers (21, 22) are lowered in the vertical direction during the layer-by-layer processing from a treatment portion (B1) of the processing region (2) to a removal portion (B2) of the processing region (2). In addition, the drive (33) moves the at least one separation element (31a, 32a) in such a way that the at least one separation element (31a, 32a) in the removal portion (B2) of the processing region is removed at least in part from the processing region (2) in such a way that a lower of the chambers (21, 22) is opened, so that the produced moulded bodies (K1-K7) fall or slide out of the processing region (2).

IPC 8 full level

B29C 64/153 (2017.01); **B22F 10/00** (2021.01); **B22F 12/00** (2021.01); **B29C 64/165** (2017.01); **B29C 64/176** (2017.01); **B29C 64/188** (2017.01);
B29C 64/232 (2017.01); **B29C 64/236** (2017.01); **B29C 64/241** (2017.01); **B29C 64/245** (2017.01); **B29C 64/357** (2017.01);
B29C 64/371 (2017.01); **B29C 64/379** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01); **B33Y 40/00** (2015.01)

CPC (source: EP US)

B22F 10/14 (2021.01 - EP); **B22F 10/28** (2021.01 - EP); **B22F 10/64** (2021.01 - EP); **B22F 10/66** (2021.01 - EP); **B22F 10/68** (2021.01 - EP);
B22F 10/70 (2021.01 - EP); **B22F 12/86** (2021.01 - EP); **B29B 17/0005** (2013.01 - US); **B29C 64/153** (2017.07 - EP US);
B29C 64/165 (2017.07 - EP); **B29C 64/176** (2017.07 - EP); **B29C 64/188** (2017.07 - EP US); **B29C 64/232** (2017.07 - EP);
B29C 64/236 (2017.07 - EP); **B29C 64/241** (2017.07 - EP); **B29C 64/245** (2017.07 - EP US); **B29C 64/30** (2017.07 - US);
B29C 64/357 (2017.07 - EP); **B29C 64/371** (2017.07 - EP US); **B29C 64/379** (2017.07 - EP); **B33Y 10/00** (2014.12 - EP US);
B33Y 30/00 (2014.12 - EP US); **B33Y 40/00** (2014.12 - EP); **B33Y 40/20** (2020.01 - US); **B22F 2999/00** (2013.01 - EP);
Y02P 10/25 (2015.11 - EP)

C-Set (source: EP)

B22F 2999/00 + B22F 10/60 + B22F 2003/247 + B22F 2003/248 + B22F 2003/242

Citation (search report)

See references of WO 2022037933A1

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)

EP 3957466 A1 20220223; CN 116847973 A 20231003; EP 4143011 A1 20230308; US 2023364857 A1 20231116;
WO 2022037933 A1 20220224

DOCDB simple family (application)

EP 20192167 A 20200821; CN 202180051311 A 20210803; EP 2021071633 W 20210803; EP 21754793 A 20210803;
US 202118022038 A 20210803