Title (en)

ASCERTAINING PROPERTY VALUES OF A SEGMENT OF A MANUFACTURED PRODUCT MADE OF MULTIPLE LAYERS OF A CONSTRUCTION MATERIAL

Title (de)

ERMITTLUNG VON EIGENSCHAFTSWERTEN EINES SEGMENTS EINES AUS MEHREREN SCHICHTEN EINES AUFBAUMATERIALS AUFGEBAUTEN FERTIGPRODUKTS

Title (fr)

DÉTERMINATION DE VALEURS DE PROPRIÉTÉS D'UN SEGMENT D'UN PRODUIT MANUFACTURÉ CONSTITUÉ DE PLUSIEURS COUCHES D'UN MATÉRIAU DE CONSTRUCTION

Publication

EP 4377035 A1 20240605 (DE)

Application

EP 22754337 A 20220718

Priority

- DE 102021119639 A 20210728
- EP 2022070101 W 20220718

Abstract (en)

[origin: WO2023006485A1] The invention relates to a method and a device (70) for ascertaining property values of a segment (SG, SG1, SG2, SG3) of a manufactured product (2, 2', 2"), which is made of multiple layers (L, L1, L2, L3, L4) of a construction material (13), of an additive manufacturing process. In the process, a parameter set (PS, PS') is ascertained which comprises a defined group of process parameter values for the construction process of at least one layer (L, L1, L2, L3, L4) of the segment (SG, SG1, SG2, SG3). At least one process parameter value comprises a layer scanning direction arrangement (HS2, HS3). Furthermore, at least one segment scanning direction distribution (SSV) is ascertained for the construction process of the segment (SG, SG1, SG2, SG3). A macroproperty value (MWA) of the segment is ascertained on the basis of the parameter set (PS) and the segment scanning direction distribution (SSV). The invention additionally relates to a method and a testing device (80) for testing a manufactured product (2, 2', 2"), to a control data generating device (54, 54') which comprises such a testing device (80), to a control device (50) for a production device (1), said control device comprising such a control data generating device (54, 54'), and to a production device (1). The invention also relates to a method for setting up a basic property database (EDB) and to a property database system (DBS) comprising such a basic property database (EDB).

IPC 8 full level

B22F 10/28 (2021.01); **B22F 10/80** (2021.01); **B29C 64/153** (2017.01); **B29C 64/393** (2017.01); **B33Y 10/00** (2015.01); **B33Y 50/00** (2015.01); **G05B 19/4099** (2006.01); **G06F 30/20** (2020.01); G06F 113/10 (2020.01)

CPC (source: EP)

B22F 10/28 (2021.01); **B22F 10/80** (2021.01); **B29C 64/153** (2017.08); **B29C 64/386** (2017.08); **B29C 64/393** (2017.08); **B33Y 10/00** (2014.12); **B33Y 50/00** (2014.12); **B33Y 50/02** (2014.12); B22F 10/36 (2021.01); B22F 10/366 (2021.01); B22F 10/85 (2021.01); G06F 2113/10 (2020.01)

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 102022117936 A1 20230202; CN 117980093 A 20240503; EP 4377035 A1 20240605; WO 2023006485 A1 20230202

DOCDB simple family (application)

DE 102022117936 A 20220718; CN 202280050306 A 20220718; EP 2022070101 W 20220718; EP 22754337 A 20220718