

Title (en)

METHOD AND ELECTRON BEAM EQUIPMENT FOR PROCESSING POWDERED MATERIALS AT HIGH ACCELERATION VOLTAGES

Title (de)

VERFAHREN SOWIE ELEKTRONENSTRAHLANLAGE ZUM BEARBEITEN VON PULVERFÖRMIGEN WERKSTOFFEN BEI HOHEN BESCHLEUNIGUNGSSPANNUNGEN

Title (fr)

PROCÉDÉ ET ÉQUIPEMENT COMPRENANT UN FAISCEAU D'ÉLECTRONS POUR LE TRAITEMENT DE MATÉRIAUX PULVÉRULENTS À DES TENSIONS D'ACCÉLÉRATION ÉLEVÉES

Publication

EP 4003624 A1 20220601 (DE)

Application

EP 20750223 A 20200729

Priority

- DE 102019120570 A 20190730
- EP 2020071433 W 20200729

Abstract (en)

[origin: WO2021018980A1] The invention relates to methods for processing a powdered material using electron beam equipment for the additive manufacture of components, which methods solve the problem of electrostatic powder entrainment and significantly reduce the process times. This effect is achieved by acceleration voltages of 90 kV or greater in the pre-heating step and/or in the melting step.

IPC 8 full level

B22F 3/105 (2006.01); **B33Y 50/02** (2015.01)

CPC (source: CN EP US)

B22F 10/28 (2021.01 - CN EP US); **B22F 10/36** (2021.01 - CN); **B22F 10/362** (2021.01 - EP US); **B22F 12/41** (2021.01 - CN EP US); **B22F 12/90** (2021.01 - CN); **B23K 15/0086** (2013.01 - US); **B33Y 10/00** (2014.12 - CN US); **B33Y 30/00** (2014.12 - CN US); **B33Y 40/10** (2020.01 - US); **B33Y 50/02** (2014.12 - EP); **B23K 2103/08** (2018.08 - 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)

WO 2021018980 A1 20210204; CN 114423544 A 20220429; CN 114423544 B 20240726; DE 102019120570 A1 20210204; EP 4003624 A1 20220601; JP 2022543047 A 20221007; US 2022314326 A1 20221006

DOCDB simple family (application)

EP 2020071433 W 20200729; CN 202080064646 A 20200729; DE 102019120570 A 20190730; EP 20750223 A 20200729; JP 2022506421 A 20200729; US 202017631537 A 20200729