

Title (en)

METHOD FOR MAKING A STRUCTURED MAGNETIC MATERIAL WITH INTEGRATED PARTICLE INSULATION

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES STRUKTURIERTEN MAGNETISCHEN MATERIALS MIT INTEGRIERTER PARTIKELISOLIERUNG

Title (fr)

PROCÉDÉ DE FABRICATION D'UN MATÉRIAU MAGNÉTIQUE STRUCTURÉ AVEC ISOLATION DE PARTICULES INTÉGRÉE

Publication

EP 3792944 B1 20231108 (EN)

Application

EP 20203613 A 20140305

Priority

- US 201313836615 A 20130315
- EP 14769666 A 20140305
- US 2014020736 W 20140305

Abstract (en)

[origin: WO2014149761A2] A system for forming a soft magnetic bulk material of a predetermined shape from a magnetic material and a source of insulating material. The systems has a heating device; a deposition device; a support configured to support the soft magnetic bulk material of the predetermined shape; and a mask configured as a negative of at least a portion of the predetermined shape. The heating device heats the magnetic material to form particles having a softened state and wherein the deposition device deposits successive layers of particles of the magnetic material in the softened state on the support with the mask located between the deposition device and the support. The mask is indexed to a position relative to the support upon deposition of the successive layers. The mask selectively blocks the successive layers of particles of the magnetic material in the softened state from being deposited on the support forming the soft magnetic bulk material of a predetermined shape on the support.

IPC 8 full level

H01F 41/02 (2006.01); **B22D 23/00** (2006.01); **C23C 4/01** (2016.01); **C23C 4/123** (2016.01); **H01F 1/24** (2006.01)

CPC (source: EP)

B05B 1/083 (2013.01); **B05B 7/224** (2013.01); **C23C 4/01** (2016.01); **C23C 4/08** (2013.01); **C23C 4/131** (2016.01); **C23C 24/04** (2013.01); **H01F 1/24** (2013.01); **H01F 41/0246** (2013.01)

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

DOCDB simple family (publication)

WO 2014149761 A2 20140925; **WO 2014149761 A3 20141231**; EP 2969315 A2 20160120; EP 2969315 A4 20170419; EP 2969315 B1 20201202; EP 3792944 A1 20210317; EP 3792944 B1 20231108; EP 4279630 A2 20231122; EP 4279630 A3 20240313; JP 2016516896 A 20160609; JP 6173554 B2 20170802

DOCDB simple family (application)

US 2014020736 W 20140305; EP 14769666 A 20140305; EP 20203613 A 20140305; EP 23200660 A 20140305; JP 2016500661 A 20140305