

Title (en)

DEVICE FOR HIGH-DENSITY MOLDING AND METHOD FOR HIGH-DENSITY MOLDING OF MIXED POWDER

Title (de)

VORRICHTUNG FÜR HOCHDICHE FORMUNG UND VERFAHREN ZUR HOCHDICHTEN FORMUNG VON MISCHPULVER

Title (fr)

DISPOSITIF DE MOULAGE HAUTE DENSITÉ ET PROCÉDÉ DE MOULAGE HAUTE DENSITÉ DE POUDRE MIXTE

Publication

EP 2842665 A4 20160309 (EN)

Application

EP 13780764 A 20130422

Priority

- JP 2012098058 A 20120423
- JP 2013061739 W 20130422

Abstract (en)

[origin: EP2842665A1] A first die (21D) is filled with a mixed powder (100) that is a mixture of a basic metal powder and a low-melting-point lubricant powder. A first pressure is applied to the mixed powder to form a mixed powder intermediate compressed body (110) having a protrusion (110A) that protrudes in the pressing direction as compared with the configuration of a mixed powder final compressed body (120). The mixed powder intermediate compressed body (110) is heated to the melting point of the lubricant powder. The heated mixed powder intermediate compressed body (110) is placed in a second die (41D). A second pressure is applied to the mixed powder intermediate compressed body (110) to press-mold the mixed powder intermediate compressed body (110) while crushing the protrusion (110A) in the pressing direction to form the high-density mixed powder final compressed body (120) having high density and the desired configuration.

IPC 8 full level

B22F 3/02 (2006.01); **B22F 3/03** (2006.01); **B30B 11/02** (2006.01); **H01F 1/22** (2006.01); **H01F 41/02** (2006.01)

CPC (source: EP US)

B22F 3/02 (2013.01 - EP US); **B22F 3/03** (2013.01 - EP US); **B30B 11/027** (2013.01 - EP US); **B30B 15/304** (2013.01 - EP US);
B30B 15/32 (2013.01 - EP US); **C22C 38/00** (2013.01 - EP); **C22C 38/02** (2013.01 - EP US); **C22C 45/00** (2013.01 - EP US);
C22C 45/02 (2013.01 - EP US); **H01F 41/0246** (2013.01 - EP US); **C22C 33/02** (2013.01 - EP US)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 2013161744A1

Cited by

US10354790B2; US11508512B2; US11636970B2

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)

EP 2842665 A1 20150304; EP 2842665 A4 20160309; CN 103418787 A 20131204; CN 203253923 U 20131030; JP 5881820 B2 20160309;
JP WO2013161744 A1 20151224; KR 20150011809 A 20150202; TW 201408403 A 20140301; US 2015118096 A1 20150430;
WO 2013161744 A1 20131031

DOCDB simple family (application)

EP 13780764 A 20130422; CN 201310141703 A 20130422; CN 201320207223 U 20130422; JP 2013061739 W 20130422;
JP 2014512544 A 20130422; KR 20147031969 A 20130422; TW 102114232 A 20130422; US 201314396368 A 20130422