

Title (en)

METHOD FOR PRODUCING A COMPOSITE PART

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES VERBUNDBAUTEILS

Title (fr)

PROCÉDÉ DE FABRICATION D'UN ÉLÉMENT COMPOSITE

Publication

EP 2480358 B1 20210630 (DE)

Application

EP 10759809 A 20100908

Priority

- DE 102009042603 A 20090923
- EP 2010005524 W 20100908

Abstract (en)

[origin: WO2011035858A1] The invention relates to a method for producing a composite part, the composite part comprising at least one powder metal part compacted from a powdery material and at least one solid part. The powdery material is compacted to a powder metal part inside the working chamber of a press, especially a pressing tool of a press, and the solid part is at least partially fed to the working chamber in the same step, especially in the same working cycle of the press so that the composite part is produced within one working cycle.

IPC 8 full level

B22F 3/03 (2006.01); **B22F 7/08** (2006.01); **B30B 11/02** (2006.01); **B30B 11/34** (2006.01)

CPC (source: EP US)

B22F 3/03 (2013.01 - EP US); **B22F 7/08** (2013.01 - EP US); **B30B 11/02** (2013.01 - EP US); **B30B 11/025** (2013.01 - EP);
B30B 11/027 (2013.01 - EP US); **B30B 11/34** (2013.01 - EP); **B22F 2998/10** (2013.01 - EP US); **Y10T 428/12063** (2015.01 - EP US);
Y10T 428/24521 (2015.01 - EP US); **Y10T 428/31678** (2015.04 - EP US)

C-Set (source: EP US)

B22F 2998/10 + B22F 7/08 + B22F 3/10

Citation (examination)

- DE 19944522 A1 20000330 - HITACHI POWDERED METALS [JP]
- US 5667536 A 19970916 - HASEGAWA MIKI [JP]
- EP 2279827 A1 20110202 - HILTI AG [LI]

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102009042603 A1 20110324; CN 102770222 A 20121107; CN 102770222 B 20160629; EP 2480358 A1 20120801;
EP 2480358 B1 20210630; ES 2887337 T3 20211222; IN 3052DEN2012 A 20150731; JP 2013505359 A 20130214;
US 2012214014 A1 20120823; WO 2011035858 A1 20110331; WO 2011035858 A8 20120503; WO 2011035858 A9 20110630

DOCDB simple family (application)

DE 102009042603 A 20090923; CN 201080042512 A 20100908; EP 10759809 A 20100908; EP 2010005524 W 20100908;
ES 10759809 T 20100908; IN 3052DEN2012 A 20120410; JP 2012530149 A 20100908; US 201213427223 A 20120322