

Title (en)

Material prepared by powder metallurgy with improved isotropy of the mechanical properties

Title (de)

Pulvermetallurgisch hergestelltes Material mit verbesserter Isotropie der mechanischen Eigenschaften

Title (fr)

Matériau préparé par métallurgie des poudres avec isotropie améliorée des propriétés mécaniques

Publication

EP 1129803 B1 20061220 (DE)

Application

EP 01890047 A 20010223

Priority

AT 3492000 A 20000303

Abstract (en)

[origin: EP1129803A2] The method involves forming the powder with nitrogen and compacting the powder in a capsule, which is evacuated, sealed and then heated and pressing isostatically. The blank is then forged or rolled. A blank of the desired cross-section is formed and then deformed. The deformation in the width and in the thickness directions of the cross-section are not more than twice, but preferably not more than 1.5 times the lowest deformation value. An Independent claim is included for a material formed using the method and having a width of at least 3.1 times its thickness and a deformation degree of at least four.

IPC 8 full level

B21J 5/00 (2006.01); **B22F 3/16** (2006.01); **B21K 5/12** (2006.01); **B22F 3/15** (2006.01); **B22F 3/17** (2006.01); **B22F 3/18** (2006.01); **B22F 3/24** (2006.01); **B22F 5/00** (2006.01); **B22F 5/10** (2006.01); **B22F 7/00** (2006.01); **B22F 9/08** (2006.01); **C22C 33/02** (2006.01)

CPC (source: EP US)

B22F 3/16 (2013.01 - EP US); **B22F 3/18** (2013.01 - EP US); **B22F 5/00** (2013.01 - EP US); **B22F 5/006** (2013.01 - EP US); **C22C 33/0278** (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

C-Set (source: EP US)

1. **B22F 2998/10** + **B22F 9/082** + **B22F 3/1208** + **B22F 3/15**
2. **B22F 2999/00** + **B22F 9/082** + **B22F 2201/02**

Cited by

DE10340133B3; RU2504455C1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated extension state (EPC)

AL LT LV MK RO SI

DOCDB simple family (publication)

EP 1129803 A2 20010905; **EP 1129803 A3 20011004**; **EP 1129803 B1 20061220**; AT 409831 B 20021125; AT A3492000 A 20020415; AT E348673 T1 20070115; DE 50111660 D1 20070201; DK 1129803 T3 20070430; EP 1779947 A1 20070502; ES 2275645 T3 20070616; JP 2001316706 A 20011116; JP 2010047840 A 20100304; PT 1129803 E 20070330; US 2001022945 A1 20010920; US 6630102 B2 20031007

DOCDB simple family (application)

EP 01890047 A 20010223; AT 01890047 T 20010223; AT 3492000 A 20000303; DE 50111660 T 20010223; DK 01890047 T 20010223; EP 06025501 A 20010223; ES 01890047 T 20010223; JP 2001097353 A 20010223; JP 2009212395 A 20090825; PT 01890047 T 20010223; US 79645201 A 20010302