

Title (en)

Process for preparing a circular fiberreinforced metallic workpiece

Title (de)

Verfahren zur Herstellung eines ringförmigen faserverstärkten Metallkörpers

Title (fr)

Procédé d'obtention d'une pièce circulaire métallique renforcée par des fibres

Publication

EP 0657554 B1 20000802 (FR)

Application

EP 94402806 A 19941207

Priority

FR 9314698 A 19931208

Abstract (en)

[origin: EP0657554A1] Process making it possible to produce by isothermal forging circular articles reinforced with fibres over chosen portions of their section, the other portions remaining available for performing the other functions of the article. The invention is noteworthy in that it consists chiefly in producing grooves (8) in a blank (3) of the article (1), in producing preforms (12) from reinforcing fibre and from added metal to the dimensions of the grooves (8), in closing these grooves (8) using plugs (14) and in forming the article (1) by isothermal forging. Application to high-performance rotors such as the rotors of turbine engines employed in aeronautics. <IMAGE>

IPC 1-7

C22C 47/06; C22C 47/20; C22C 49/11; F01D 21/04; B23P 15/00; B21K 1/76

IPC 8 full level

B21K 25/00 (2006.01); **B21F 17/00** (2006.01); **B21K 1/36** (2006.01); **B21K 1/76** (2006.01); **B22F 3/17** (2006.01); **B22F 5/10** (2006.01);
B22F 5/12 (2006.01); **B22F 7/08** (2006.01); **C22C 47/00** (2006.01); **C22C 47/20** (2006.01)

CPC (source: EP US)

B21F 17/00 (2013.01 - EP US); **B21K 1/36** (2013.01 - EP US); **B21K 1/761** (2013.01 - EP US); **B22F 3/17** (2013.01 - EP US);
C22C 47/00 (2013.01 - EP US); **C22C 47/064** (2013.01 - EP US); **C22C 47/068** (2013.01 - EP US); **C22C 47/20** (2013.01 - EP US);
F05B 2250/141 (2013.01 - EP US); **Y10S 72/70** (2013.01 - EP)

Cited by

CN102581557A; CN102083613A; EP0775754A1; FR2741383A1; US5745994A

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0657554 A1 19950614; EP 0657554 B1 20000802; DE 69425418 D1 20000907; DE 69425418 T2 20010315; FR 2713662 A1 19950616;
FR 2713662 B1 19960112; JP 3194678 B2 20010730; JP H07197108 A 19950801; US 5562245 A 19961008; US 5642851 A 19970701

DOCDB simple family (application)

EP 94402806 A 19941207; DE 69425418 T 19941207; FR 9314698 A 19931208; JP 30234094 A 19941206; US 35170394 A 19941208;
US 61871596 A 19960320