Title (en)

Metal matrix composite bodies with high stiffness and high stability in a longitudinal direction

Title (de)

Metallmatrixverbundkörper mit hoher Steifigkeit und hoher Stabilität in Längsrichtung

Title (fr)

Pièce en matériau composite à matrice métallique à haute rigidité et à grande stabilité dans une direction longitudinale

Publication

**EP 0922779 B1 20020821 (FR)**

Application

**EP 98403009 A 19981201**

Priority

FR 9715306 A 19971204

Abstract (en)

[origin: EP0922779A1] A long metal matrix composite material part comprises 35-45 vol.% aluminum alloy matrix and 65-55 vol.% continuous carbon fibers arranged in successive layers parallel to the length direction. ≥ 90% of the fibers are ultra-high modulus fibers which are oriented, to the length direction, at 0 to plus or minus 5 degrees in 25-60% of the layers and at plus or minus 20 to plus or minus 40 degrees in the other layers. An Independent claim is also included for a similar long metal matrix composite material part in which the matrix comprises a magnesium alloy and the ultra-high modulus carbon fibers are oriented at 0 to plus or minus 5 degrees to the length direction in ≥ 90% of the layers.

IPC 1-7

**C22C 49/14**

IPC 8 full level

**B22D 19/14** (2006.01); **C22C 47/00** (2006.01); **C22C 47/08** (2006.01); **C22C 49/06** (2006.01); **C22C 49/14** (2006.01); **D01F 9/12** (2006.01); B32B 15/14 (2006.01); C22C 101/10 (2006.01)

CPC (source: EP US)

**C22C 47/068** (2013.01 - EP US); **C22C 47/08** (2013.01 - EP US); **C22C 49/14** (2013.01 - EP US); B22F 2998/00 (2013.01 - EP US); Y10T 428/249927 (2015.04 - EP US); Y10T 428/249929 (2015.04 - EP US); Y10T 428/249931 (2015.04 - EP US); Y10T 442/3382 (2015.04 - EP US); Y10T 442/654 (2015.04 - EP US)

Cited by

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**EP 0922779 A1 19990616**; **EP 0922779 B1 20020821**; CA 2255402 A1 19990604; DE 69807306 D1 20020926; DE 69807306 T2 20030417; ES 2182246 T3 20030301; FR 2772049 A1 19990611; FR 2772049 B1 20000218; JP 4283359 B2 20090624; JP H11256254 A 19990921; RU 2217522 C2 20031127; US 6197411 B1 20010306

DOCDB simple family (application)

**EP 98403009 A 19981201**; CA 2255402 A 19981202; DE 69807306 T 19981201; ES 98403009 T 19981201; FR 9715306 A 19971204; JP 34617898 A 19981204; RU 98122445 A 19981203; US 19030298 A 19981113