

Title (en)

BULK METALLIC GLASS/GRAPHITE COMPOSITES

Title (de)

VERBUNDWERKSTOFFE AUS METALLISCHEM MASSIVGLAS UND GRAPHIT

Title (fr)

COMPOSITES DE GRAPHITE/VERRE MÉTALLIQUE MASSIF

Publication

EP 1957686 B1 20100804 (EN)

Application

EP 06775159 A 20060829

Priority

- CH 2006000466 W 20060829
- US 72240905 P 20051003

Abstract (en)

[origin: WO2007038882A1] A composite material based on a bulk metallic glass is disclosed. In an amorphous alloy phase forming a substantially continuous matrix, a second phase comprising graphite particles is embedded. The alloy is preferably zirconium based. The particles may have a carbide surface layer, which may be formed in situ by reaction of graphite with the alloy. A third phase comprising carbide particles may also be present. The composite material has high plasticity, high yield strength, good elasticity and low coefficient of friction, which renders it a good candidate for applications like joints, frictional bearings or Springs.

IPC 8 full level

C22C 45/10 (2006.01); **C22C 16/00** (2006.01); **C22C 32/00** (2006.01)

CPC (source: EP US)

C22C 1/1068 (2013.01 - EP US); **C22C 16/00** (2013.01 - EP US); **C22C 32/0084** (2013.01 - EP US); **C22C 45/10** (2013.01 - EP US)

Cited by

CN110981474A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007038882 A1 20070412; AT E476533 T1 20100815; DE 602006016001 D1 20100916; EP 1957686 A1 20080820; EP 1957686 B1 20100804; JP 2009510267 A 20090312; JP 5465879 B2 20140409; US 2009194205 A1 20090806

DOCDB simple family (application)

CH 2006000466 W 20060829; AT 06775159 T 20060829; DE 602006016001 T 20060829; EP 06775159 A 20060829; JP 2008533841 A 20060829; US 8308006 A 20060829