Title (en)

Composite article prepared by powder metallurgy and process for its manufacture

Title (de)

Pulvermetallurgisch hergestellter Verbundwerkstoff und Verfahren zu dessen Herstellung

Title (fr)

Article composite préparé par métallurgie des poudres et sa fabrication

Publication

EP 1023959 A3 20040324 (DE)

Application

EP 00101609 A 20000128

Priority

DE 19903619 A 19990129

Abstract (en)

[origin: DE19903619C1] A powder metallurgical composite material comprises refractory solid solution or intermetallic phase grains embedded in a low melting metal matrix. A powder metallurgically produced composite material comprises a metal matrix of \} 1200 deg C melting point containing embedded grains of refractory components in solid solution or intermetallic phase form. An Independent claim is also included for production of the above composite material, in which the refractory solid solution or intermetallic phase is produced by cooling a melt at greater than 100 K/min. Preferred Features: The matrix consists of Cu, Ag and/or Al and the refractory components are selected from group Vb (V, Nb, Ta) and VIb (Cr, Mo, W) metals and their nitrides, carbides, silicides and/or borides.

IPC 1-7

B22F 1/00; H01H 11/04; H01H 1/02; C22C 1/04; C22C 29/00; C22C 32/00

IPC 8 full level

H01B 1/02 (2006.01); **C22C 1/04** (2006.01); **C22C 29/00** (2006.01); **C22C 32/00** (2006.01); **C22F 1/11** (2006.01); **H01H 1/02** (2006.01); H01H 11/04 (2006.01)

CPC (source: EP US)

C22C 1/047 (2023.01 - EP US); **C22C 29/00** (2013.01 - EP US); **C22C 32/0047** (2013.01 - EP US); **H01H 1/0203** (2013.01 - EP US); H01H 11/048 (2013.01 - EP US); Y10T 428/12028 (2015.01 - EP US)

Citation (search report)

- [XD] EP 0668599 A2 19950823 - TOSHIBA KK [JP]
- [X] US 4915902 A 19900410 - BRUPBACHER JOHN M [US], et al
- [X] US 4066451 A 19780103 - RUDY ERWIN

Designated contracting state (EPC)

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

DOCDB simple family (publication)

DE 19903619 C1 20000608; DE 50014151 D1 20070426; EP 1023959 A2 20000802; EP 1023959 A3 20040324; EP 1023959 B1 20070314; ES 2283251 T3 20071101; JP 2000219923 A 20000808; US 6350294 B1 20020226

DOCDB simple family (application)

DE 19903619 A 19990129; DE 50014151 T 20000128; EP 00101609 A 20000128; ES 00101609 T 20000128; JP 2000013117 A 20000121; US 49065900 A 20000125