

Title (en)

Metal-ceramic composite material with high toughness and process for its manufacture.

Title (de)

Keramik-Metallverbundkörper mit hoher Zähigkeit sowie Verfahren seiner Herstellung.

Title (fr)

Matériau composite céramo-métallique à haute ténacité et procédé pour sa fabrication.

Publication

EP 0651067 A3 19961218 (FR)

Application

EP 94116793 A 19941025

Priority

CH 328893 A 19931101

Abstract (en)

[origin: EP0651067A2] The ceramo-metallic composite material includes a ceramic phase with particles of alumina or of an alumina-based solid solution, a refractory phase comprising titanium nitride and/or carbonitride, and a metallic matrix based on Ni, Co, Fe. The interface between the alumina particles or alumina solid solution and the metallic matrix is rich in nitrogen and in titanium or in compounds thereof.

IPC 1-7

C22C 29/00

IPC 8 full level

C22C 1/05 (2006.01); **C22C 29/00** (2006.01); **C22C 29/02** (2006.01)

CPC (source: EP US)

B22F 3/1007 (2013.01 - EP US); **C22C 29/00** (2013.01 - EP US); **C22C 29/02** (2013.01 - EP US); **B22F 2201/02** (2013.01 - EP US); **Y10T 428/12056** (2015.01 - EP US); **Y10T 428/12146** (2015.01 - EP US); **Y10T 428/1216** (2015.01 - EP US); **Y10T 428/12167** (2015.01 - EP US)

Citation (search report)

- [Y] US 3098723 A 19630723 - MICKS WILLIAM R
- [Y] WO 9007017 A1 19900628 - KRUPP WIDIA GMBH [DE]

Cited by

DE19800689C1; EP3974405A1; WO9935295A1

Designated contracting state (EPC)

AT BE DE ES FR GB IT LU NL SE

DOCDB simple family (publication)

EP 0651067 A2 19950503; **EP 0651067 A3 19961218**; **EP 0651067 B1 20000322**; AT E191015 T1 20000415; CH 686888 A5 19960731; DE 69423565 D1 20000427; JP H07188803 A 19950725; US 5682595 A 19971028

DOCDB simple family (application)

EP 94116793 A 19941025; AT 94116793 T 19941025; CH 328893 A 19931101; DE 69423565 T 19941025; JP 28724294 A 19941028; US 33205694 A 19941101