

Title (en)
Protective coating for single crystal superalloy

Title (de)
Schutzbeschichtung für Einkristalline Superlegierung

Title (fr)
Revêtement protecteur pour superalliage monocristallin

Publication
EP 1686200 A3 20080402 (FR)

Application
EP 06290129 A 20060119

Priority
FR 0500984 A 20050201

Abstract (en)
[origin: EP1686200A2] The monocrystalline superalloy protection procedure consists of applying a surface layer of about 35-80 per cent by weight of cobalt and 65-20 per cent tungsten to the superalloy before coating it with aluminum. The cobalt and tungsten are deposited concomitantly by electrolysis in a layer, preferably between 10 and 20 mcm thick, followed by aluminium coating in the form of aluminisation. The aluminum coating can contain an additional element such as zirconium or hafnium, and the tungsten underlayer can contain platinum or palladium.

IPC 8 full level
C25D 5/24 (2006.01); **C25D 5/10** (2006.01); **C25D 5/38** (2006.01)

CPC (source: EP US)
C25D 5/10 (2013.01 - EP US); **C25D 5/34** (2013.01 - EP US); **C25D 5/38** (2013.01 - EP US); **C25D 5/611** (2020.08 - EP US); **C25D 5/627** (2020.08 - EP US); **Y10T 428/12458** (2015.01 - EP US); **Y10T 428/12743** (2015.01 - EP US); **Y10T 428/1284** (2015.01 - EP US); **Y10T 428/12944** (2015.01 - EP US)

Citation (search report)

- [XA] US 2002197502 A1 20021226 - ZHAO JI-CHENG [US], et al
- [YA] FR 2638174 A1 19900427 - ONERA (OFF NAT AEROSPATIALE) [FR]
- [A] US 2003044634 A1 20030306 - KELLY THOMAS JOSEPH [US], et al
- [A] EP 0207874 A2 19870107 - UNITED TECHNOLOGIES CORP [US]
- [YA] V.A. PAVLOVSKII: "Heat resistant coatings on high-temperature metals", PROTECTION OF METALS, vol. 40, no. 4, 2004, pages 358 - 361, XP008051847

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

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1686200 A2 20060802; **EP 1686200 A3 20080402**; **EP 1686200 B1 20140806**; CA 2534282 A1 20060801; CA 2534282 C 20150929; FR 2881439 A1 20060804; FR 2881439 B1 20071207; US 2007071991 A1 20070329; US 7482039 B2 20090127

DOCDB simple family (application)
EP 06290129 A 20060119; CA 2534282 A 20060126; FR 0500984 A 20050201; US 34580706 A 20060201