

Title (en)

Process for obtaining protective coatings for high temperature with high roughness and coating obtained

Title (de)

Verfahren zum Gewinnen von Beschichtungen zum Schutz gegen hohe Temperaturen und hohe Rauheit und gewonnene Beschichtung

Title (fr)

Processus pour obtenir un revêtement protecteur pour hautes températures avec rugosité élevée et revêtement obtenu

Publication

EP 2202328 A1 20100630 (EN)

Application

EP 08380344 A 20081226

Priority

EP 08380344 A 20081226

Abstract (en)

The invention describes a process which allows obtaining a protective coating against oxidation at high temperature comprising a layer of MCrAlY material wherein M is selected from the group consisting of Ni, Co, Fe and their mixtures, characterised by a high surface roughness in its outer part, and high density, cohesion and reduced oxidation in its inner part. The process comprises the thermal projection of MCrAlY-based powders by high frequency pulsed detonation techniques, at different projection distances, to form the compact and dense inner part and the rough outer part. The coatings obtained can be heat treated in an inert atmosphere and can be used as bonding for a thermal barrier layer.

IPC 8 full level

C23C 4/02 (2006.01); **C23C 4/08** (2006.01); **C23C 4/12** (2006.01); **C23C 4/18** (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP)

C23C 4/02 (2013.01); **C23C 4/073** (2016.01); **C23C 4/08** (2013.01); **C23C 4/12** (2013.01); **C23C 4/126** (2016.01); **C23C 4/18** (2013.01);
C23C 28/3215 (2013.01); **C23C 28/345** (2013.01); **C23C 28/3455** (2013.01)

Citation (applicant)

- US 2008145643 A1 20080619 - REYNOLDS GEORGE H [US], et al
- US 2005260434 A1 20051124 - NELSON WARREN A [US], et al
- US 5817372 A 19981006 - ZHENG XIAOCI MAGGIE [US]
- US 2007110900 A1 20070517 - NOWAK DANIEL A [US], et al
- WO 9723299 A1 19970703 - UNITED TECHNOLOGIES CORP [US], et al
- WO 9723301 A1 19970703 - UNITED TECHNOLOGIES CORP [US], et al
- WO 9723302 A1 19970703 - UNITED TECHNOLOGIES CORP [US], et al
- WO 9723303 A1 19970703 - UNITED TECHNOLOGIES CORP [US], et al
- WO 9829191 A1 19980709 - AEROSTAR COATINGS SL [ES], et al
- WO 9912653 A1 19990318 - AEROSTAR COATINGS SL [ES], et al
- WO 9937406 A1 19990729 - AEROSTAR COATINGS SL [ES], et al
- WO 0130506 A1 20010503 - AEROSTAR COATINGS SL [ES], et al
- WO 2006042872 A1 20060427 - TURBODETCO S L [ES], et al

Citation (search report)

- [DXA] EP 1939317 A2 20080702 - UNITED TECHNOLOGIES CORP [US]
- [X] US 2008199684 A1 20080821 - APTE PRASAD SHRIKRISNNA [US], et al
- [A] WO 9313245 A1 19930708 - DETROIT DIESEL CORP [US]
- [A] US 2008057214 A1 20080306 - FAGOAGA ALTUNA IGNACIO [ES], et al
- [A] HIGUERA V ET AL: "Influence of the thermal-spray procedure on the properties of a CoNiCrAlY coating", SURFACE AND COATINGS TECHNOLOGY, ELSEVIER, AMSTERDAM, NL, vol. 200, no. 18-19, 8 May 2006 (2006-05-08), pages 5550 - 5556, XP024995689, ISSN: 0257-8972, [retrieved on 20060508]

Cited by

EP3452231A4; EP3461925A1; US11519075B2; US10408079B2; US10189082B2; US9920646B2; US10221716B2; US10436713B2;
US10386377B2; US11016108B2; US10518262B2; US11181105B2; US9895692B2; US10196920B2; US10323533B2; US10065186B2;
US10087440B2; US10190435B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2202328 A1 20100630

DOCDB simple family (application)

EP 08380344 A 20081226