Title (en)

CALCIUM MAGNESIUM ALUMINOSILICATE (CMAS) RESISTANT THERMAL BARRIER COATING AND COATING PROCESS THEREFOR

Title (de)

CALCIUM-MAGNESIUM-ALUMINIUMSILIKAT (CMAS)-RESISTENTE WÄRMEDÄMMSCHICHT UND BESCHICHTUNGSVERFAHREN DAFÜR

Title (fr)

REVÊTEMENT À BARRIÈRE THERMIQUE RÉSISTANTE EN ALUMINOSILICATE DE CALCIUM MAGNÉSIUM (CMAS) ET PROCÉDÉ DE REVÊTEMENT CORRESPONDANT

Publication

EP 2947173 B1 20190410 (EN)

Application

EP 15168227 A 20150519

Priority

US 201462000681 P 20140520

Abstract (en)

[origin: EP2947173A1] A process for coating a component and a coating system including a bond coat (46) on a superalloy substrate (44). A thermal barrier material (48) may be applied to the bond coat and a rare earth apatite (54) may be applied to the thermal barrier material (48) via one of Suspension Plasma Spray (SPS) and Solution Precursor Plasma Spray (SPPS) to form an exposed surface. The rare earth apatite (54) may be formed as Ca 2+y RE 8+x (SiO 4) 6 O 2+3x/2+y in which -2<y<2 and -2<x<2.

IPC 8 full level

C23C 4/10 (2016.01); **C23C 4/12** (2016.01); **C23C 28/00** (2006.01)

CPC (source: EP US)

C23C 4/02 (2013.01 - EP US); **C23C 4/105** (2013.01 - US); **C23C 4/11** (2016.01 - EP US); **C23C 4/127** (2013.01 - US); **C23C 4/134** (2016.01 - EP US); **C23C 28/3215** (2013.01 - EP US); **C23C 28/3455** (2013.01 - EP US); **C23C 28/36** (2013.01 - EP US); **F01D 5/282** (2013.01 - US); Y02T 50/60 (2013.01 - EP); Y10T 428/26 (2015.01 - EP US); Y10T 428/31663 (2015.04 - EP US)

Citation (examination)

None

Cited by

FR3057580A1; WO2018073538A1

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DOCDB simple family (publication)

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