

Title (en)

Erosion barrier for thermal barrier coatings

Title (de)

Erosionssperre für Wärmedämmschichten

Title (fr)

Barrière contre l'érosion pour revêtements de barrière thermique

Publication

EP 2000557 B1 20150429 (EN)

Application

EP 07252248 A 20070604

Priority

EP 07252248 A 20070604

Abstract (en)

[origin: EP2000557A1] A workpiece, such as a turbine engine component, comprises a substrate (50), a thermal barrier coating (52) on the substrate (50), and a hard erosion barrier (54) deposited over the thermal barrier coating (52). The erosion barrier (54) preferably has a Vickers hardness in the range of from 1300 to 2750 kgf/mm² (12.8 to 27.0 GPa). The erosion barrier (54) may be formed from aluminum oxide, silicon carbide, silicon nitride, or molybdenum disilicide. The erosion barrier (54) may be formed using either an electrophoretic deposition process or a slurry process.

IPC 8 full level

C23C 2/04 (2006.01); **C23C 24/08** (2006.01); **C23C 28/04** (2006.01); **C25D 13/02** (2006.01); **C25D 15/00** (2006.01)

CPC (source: EP)

C23C 24/08 (2013.01); **C23C 28/04** (2013.01); **C25D 13/02** (2013.01); **F01D 5/286** (2013.01); **F01D 5/288** (2013.01); **F05D 2230/80** (2013.01)

Cited by

CN109913870A; EP2241648A3; FR3073866A1; EP2113586A3; ITMI20090934A1; US10808308B2; US8186946B2; US11479873B2; EP2113586A2; EP3789518A1; WO2012152357A1; WO2019102137A1; WO2011007019A1; US9840914B2; WO2015114227A1; EP3707297B1

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

EP 2000557 A1 20081210; EP 2000557 B1 20150429

DOCDB simple family (application)

EP 07252248 A 20070604