Title (en)

Turbine blade, manufacturing method of turbine blade, and strip judging method of a thermal barrier coat

Title (de)

Turbinenschaufel, Herstellungsverfahren einer Turbinenschaufel, sowie Beurteilungsverfahren für das Ablösen einer Wärmedämmschicht

Title (fr)

Aube de turbine, procédé de fabrication d'une aube de turbine, et procédé d'évaluation du détachement d'une couche de protection thermique

Publication

EP 1318273 A2 20030611 (EN)

Application

EP 02012119 A 20020531

Priority

JP 2001374542 A 20011207

Abstract (en)

There is disclosed a turbine blade comprising a turbine blade main body 10 with a blade-shaped section and a thermal barrier coat 20 as an insulating layer. The turbine blade main body 10 includes an internal air gap 12 disposed inside so that a coolant gas passes and a plurality of coolant gas ports 13 connected to the internal air gap and disposed in the outer peripheral surface. The thermal barrier coat 20 is coated with the outer peripheral surface of the turbine blade main body. The thermal barrier coat fills in at least some of the coolant gas ports. Thereby, a temperature of a high-temperature gas is raised and the turbine blade can be run. <IMAGE>

IPC 1-7

F01D 5/18; F01D 5/28; C23C 4/00

IPC 8 full level

C23C 4/00 (2006.01); **C23C 4/02** (2006.01); **C23C 28/00** (2006.01); **F01D 5/18** (2006.01); **F01D 5/28** (2006.01)

CPC (source: EP US)

C23C 4/00 (2013.01 - EP US); **C23C 4/02** (2013.01 - EP US); **C23C 28/00** (2013.01 - EP US); **C23C 28/321** (2013.01 - EP US); **C23C 28/3215** (2013.01 - EP US); **C23C 28/345** (2013.01 - EP US); **C23C 28/3455** (2013.01 - EP US); **F01D 5/182** (2013.01 - EP US); **F01D 5/288** (2013.01 - EP US); F05D 2230/90 (2013.01 - EP US)

Cited by

EP1655454A1; EP1669545A1; EP1321629A3; EP3054105A1; US7909581B2; US7186091B2; US9718735B2; WO2006061267A1; EP2935836B1

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

EP 1318273 A2 20030611; **EP 1318273 A3 20041229**; **EP 1318273 B1 20061129**; CA 2385932 A1 20030607; CA 2385932 C 20070717; DE 60216405 D1 20070111; DE 60216405 T2 20070329; JP 2003172102 A 20030620; US 2003108424 A1 20030612

DOCDB simple family (application)

EP 02012119 A 20020531; CA 2385932 A 20020508; DE 60216405 T 20020531; JP 2001374542 A 20011207; US 14696402 A 20020517