Title (en)

Airfoil with cooling passage

Title (de)

Schaufelprofil mit Kühlkanälen

Title (fr)

Aube munie de canaux de refroidissement

Publication

EP 2565383 B1 20191002 (EN)

Application

EP 12182433 A 20120830

Priority

US 201113222490 A 20110831

Abstract (en)

[origin: EP2565383A2] An example method of manufacturing an airfoil (30) includes providing a ceramic core (64) corresponding to an interior cooling channel (42). A refractory metal core (66) is provided that corresponds to a cooling passage (46). The cores are arranged in a mold (60). An airfoil structure (30) is cast about the cores to provide a turbine engine airfoil. The turbine engine airfoil (30) includes a wall (44) providing the interior cooling channel (42) and an exterior airfoil surface (34). The cooling passage (46) is provided in the wall (44) and fluidly connects the interior cooling channel (42) to the exterior airfoil surface (34). The cooling passage (46) includes multiple inlets (48) and multiple outlets (50) respectively adjoining the interior cooling channel (42) and the exterior airfoil surface (34). At least one of a first inlet (48) and outlet (50) has a different structural flow characteristic than at least one of a second inlet and outlet (48,50).

IPC 8 full level

F01D 5/18 (2006.01)

CPC (source: EP US)

B22C 9/103 (2013.01 - EP); **F01D 5/186** (2013.01 - EP US); **F01D 5/187** (2013.01 - EP US); F05D 2250/50 (2013.01 - EP US); F05D 2250/70 (2013.01 - EP US); F05D 2260/204 (2013.01 - EP US); F05D 2260/221 (2013.01 - EP US)

Citation (examination)

EP 2374996 A2 20111012 - UNITED TECHNOLOGIES CORP [US]

Cited by

EP3246110A1; EP3406851A1; EP3650648A1; US10422232B2; US10323569B2; US10294798B2; US11339718B2; EP2956644A4; EP3460216A1; EP2971667A4; EP3650645A1; US10563517B2; US11149556B2

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 2565383 A2 20130306; **EP 2565383 A3 20160907**; **EP 2565383 B1 20191002**; US 2013052037 A1 20130228

DOCDB simple family (application)

EP 12182433 A 20120830; US 201113222490 A 20110831