

Title (en)

Airfoil portion of a rotor blade or guide vane of a turbo-machine

Title (de)

Blattprofilabschnitt eines Rotorblattes oder einer Leitschaufel einer Turbomaschine

Title (fr)

Partie de profil aérodynamique d'une pale de rotor ou aube directrice d'une turbomachine

Publication

**EP 2921649 B1 20210428 (EN)**

Application

**EP 14160697 A 20140319**

Priority

EP 14160697 A 20140319

Abstract (en)

[origin: EP2921649A1] An airfoil portion (100) having an outer wall that defines a cavity for receiving cooling air. At least one insert disposed within the cavity that is configured to initially receive at least a portion of the cooling air entering the chamber of the insert and direct the cooling air through a plurality of insert apertures to cool the inner surface of the outer wall of the airfoil portion. The insert further comprises a configuration that generally conforms to the contour of the outer wall of the chamber but in spaced relation thereto. A portion of the cooling air exits the airfoil portion through a plurality of film cooling apertures formed through the outer wall. A second insert (200) forms the trailing edge channel at the end of the main insert (106).

IPC 8 full level

**F01D 5/18** (2006.01)

CPC (source: EP KR US)

**F01D 5/147** (2013.01 - US); **F01D 5/188** (2013.01 - KR); **F01D 5/189** (2013.01 - EP US); **F05D 2220/31** (2013.01 - KR); **F05D 2220/32** (2013.01 - KR); **F05D 2240/12** (2013.01 - KR); **F05D 2240/30** (2013.01 - KR); **F05D 2260/201** (2013.01 - EP KR US); **F05D 2260/205** (2013.01 - KR); **F05D 2260/22141** (2013.01 - EP KR US)

Cited by

EP3323995A3; EP3170981A1; CN114607471A; FR3094743A1; CN117489418A; EP4283094A3; EP3231602A1; EP4006303A3; US10302017B2; US10724131B2; US10619949B2; US10502070B2; US10335850B2; WO2017108661A1; WO2017082868A1; US10370979B2; US11035236B2; US10323325B2; US11795828B2; US2017292195A1; US10399117B2; US11040372B2

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 2921649 A1 20150923; EP 2921649 B1 20210428**; CN 104929695 A 20150923; CN 104929695 B 20210924; JP 2015178833 A 20151008; KR 20150109279 A 20151001; US 2015267557 A1 20150924

DOCDB simple family (application)

**EP 14160697 A 20140319**; CN 201510118463 A 20150318; JP 2015054860 A 20150318; KR 20150037331 A 20150318; US 201514661318 A 20150318