Title (en)

Turbine blade with impingement cooling

Title (de)

Turbinenschaufel mit Prallkühlung

Title (fr)

Aube de turbine à gaz avec refroidissement par impact

Publication

EP 1496203 B1 20060208 (DE)

Application

EP 04090262 A 20040628

Priority

DE 10332563 A 20030711

Abstract (en)

[origin: EP1496203A1] The turbine blade has impingement cooling of the thermally highly loaded outer wall sections (2a-2f). At least one partition (3-5) is provided inside the hollow blade to form a cooling air chamber (6), and in the partition are impingement air passages (7) to direct cooling air to the inner face of the hot outer wall section. The impingement air passages are concavely curved with regard to the adjacent outer wall and are arranged parallel to it and completely in the hot outer region. The impingement air passages have an elongated hole-like or elliptical cross sectional face, the orientation of the longitudinal axis of which coincides with the radial blade orientation.

IPC 8 full level

F01D 5/18 (2006.01)

CPC (source: EP US)

F01D 5/18 (2013.01 - EP US); **F01D 5/187** (2013.01 - EP US); F05D 2250/14 (2013.01 - EP US); F05D 2250/712 (2013.01 - EP US); F05D 2260/201 (2013.01 - EP US)

Cited by

EP1605138A3; CN104254670A; EP2196625A1; GB2420156A; GB2420156B; WO2013162854A1; US7273350B2; US9506351B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

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DOCDB simple family (application)

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