

Title (en)
Turbine blade and corresponding turbine

Title (de)
Turbinenschaufel und zugehörige Turbine

Title (fr)
Aube de turbine et turbine associée

Publication
EP 2933435 A1 20151021 (DE)

Application
EP 14164723 A 20140415

Priority
EP 14164723 A 20140415

Abstract (en)
[origin: WO2015158514A1] The invention relates to a turbine blade (1) with a turbine blade airfoil (3) in which a cavity (5) is formed that is divided by a rib element (15), the height (25) of said rib element extending from a front wall (6) of the turbine blade airfoil to a rear wall (7) of the turbine blade airfoil (3). The cross-section (35) of the rib element (15) is designed such that the rib element (15) is at least partly arc-shaped in the direction (32) of the height (25) of the rib in such a manner that stresses caused by thermal differences between the front and rear wall (6, 7) within the rib element (15) can be compensated by an improved deformation capacity of the rib element (15). The rib element (15) has a cross-sectional weakening in the direction (32) of the height (25) of the rib, said weakening increasing in the direction of the central longitudinal axis (31) of the turbine blade airfoil (3) in order to increase the deformation capability and/or flexibility of the rib element.

Abstract (de)
Die Erfindung betrifft eine Turbinenschaufel (1) mit einem Turbinenschaufelblatt (3), in welchem ein Hohlraum (5) ausgebildet ist, welcher von einem Rippelement (15) unterteilt ist, dessen Rippenhöhe (25) sich von einer Vorderseitenwand (6) des Turbinenschaufelblatts zu einer Hinterseitenwand (7) des Turbinenschaufelblatts (3) erstreckt, wobei der Rippenquerschnitt (35) des Rippelements (15) derart ausgestaltet ist, dass die durch thermische Differenzen zwischen der Vorder- und Hinterseitenwand (6, 7) innerhalb des Rippelements (15) hervorgerufene Spannungen mittels eines verbesserten Verformungsvermögens des Rippelements (15) kompensierbar sind. Eine zugehörige Turbine wird ebenfalls präsent.

IPC 8 full level
F01D 5/18 (2006.01)

CPC (source: EP)
F01D 5/188 (2013.01); **F05D 2250/71** (2013.01); **F05D 2250/711** (2013.01); **F05D 2250/712** (2013.01); **F05D 2260/941** (2013.01)

Citation (search report)

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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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2933435 A1 20151021; WO 2015158514 A1 20151022

DOCDB simple family (application)
EP 14164723 A 20140415; EP 2015056399 W 20150325