

Title (en)

METHOD FOR DIFFUSING A GAS TURBINE COMPRESSION STAGE, AND DIFFUSION STAGE FOR IMPLEMENTING SAME

Title (de)

VERFAHREN ZUM DIFFUNDIEREN EINER GASTURBINENKOMPRESSIONSSTUFE UND DIFFUSIONSSTUFE ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)

PROCÉDÉ DE DIFFUSION D'UN ÉTAGE DE COMPRESSION D'UNE TURBINE A GAZ ET ÉTAGE DE DIFFUSION DE MISE EN OEUVRE

Publication

**EP 2721305 A1 20140423 (FR)**

Application

**EP 12734964 A 20120619**

Priority

- FR 1155370 A 20110620
- FR 2012051367 W 20120619

Abstract (en)

[origin: WO2012175855A1] The aim of the invention is to produce an airflow by positioning flanges, the shapes of which are optimized. Non-axisymmetrical shapes in the direction of flow and in the tangential direction are thus provided. According to one embodiment, a radial or mixed gas turbine compressor diffusion stage comprises a wheel consisting of two flanges (9) between which the fluid centrifugally or inclinedly flows from the center towards the periphery. Vanes (60) of a grating are distributed among the flanges (9) in order to channel the flow of the fluid between the leading edges (6a) of said vanes (60) on the central side, and the trailing edges on the peripheral side. At least one of the flanges (9) has an inner surface (9i) comprising at least one area (Z1, Z2) having alternating concave (91) and convex (92) curvatures between two adjacent vanes (60), in at least one of two substantially perpendicular directions, namely in the direction of flow (F) along the vanes (60) and in an inter-vane tangential direction.

IPC 8 full level

**F04D 29/44** (2006.01)

CPC (source: EP US)

**F04D 19/002** (2013.01 - US); **F04D 29/441** (2013.01 - EP US); **F04D 29/444** (2013.01 - EP US); **F05D 2250/52** (2013.01 - EP US)

Citation (search report)

See references of WO 2012175855A1

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)

**FR 2976633 A1 20121221**; **FR 2976633 B1 20150109**; CA 2838686 A1 20121227; CA 2838686 C 20190917; CN 103635698 A 20140312; CN 103635698 B 20170613; EP 2721305 A1 20140423; EP 2721305 B1 20210224; IN 118DEN2014 A 20150522; JP 2014517217 A 20140717; JP 6261498 B2 20180117; KR 101946084 B1 20190208; KR 20140047653 A 20140422; PL 2721305 T3 20210712; RU 2013156047 A 20150727; RU 2596691 C2 20160910; US 2014133957 A1 20140515; WO 2012175855 A1 20121227

DOCDB simple family (application)

**FR 1155370 A 20110620**; CA 2838686 A 20120619; CN 201280029751 A 20120619; EP 12734964 A 20120619; FR 2012051367 W 20120619; IN 118DEN2014 A 20140107; JP 2014516415 A 20120619; KR 20147000353 A 20120619; PL 12734964 T 20120619; RU 2013156047 A 20120619; US 201214126989 A 20120619