

Title (en)

Arrangement for self adjusting the tip clearance in a two or multiple stage turbine

Title (de)

Anordnung zur selbsttätigen Laufspalteinstellung bei einer zwei- oder mehrstufigen Turbine

Title (fr)

Ensemble pour le réglage autoajustable du jeu des aubes dans une turbine à deux ou multiples étages

Publication

EP 1580404 A3 20081001 (DE)

Application

EP 05090065 A 20050316

Priority

DE 102004016222 A 20040326

Abstract (en)

[origin: EP1580404A2] Each rotor (1, 2) has an expansion ring with radially movable upstream blades (5) and radially movable downstream blades (7) connected to it. The ring has the same expansion properties as the rotor. The outer platforms (9, 11) on the blades are connected via an axial bridge (16) which is fixed in the rotor circumferential direction and connected radially to the turbine outer casing (10). The intermediate blades (6) and rotor shroud sections (8a, 8b) are secured to the bridge. The bridge comprises two bridge half-sections (16, 17) connected to each other and the intermediate blades are integrally connected to the second half-section.

IPC 8 full level

F01D 11/18 (2006.01); **F01D 9/00** (2006.01); **F01D 11/16** (2006.01); **F01D 11/24** (2006.01); **F01D 25/26** (2006.01); **F28F 7/00** (2006.01)

CPC (source: EP US)

F01D 11/18 (2013.01 - EP US); **F01D 11/24** (2013.01 - EP US); **F01D 25/26** (2013.01 - EP US); **F05D 2240/11** (2013.01 - EP US)

Citation (search report)

- [XY] GB 886626 A 19620110 - BRISTOL SIDDELEY ENGINES LTD
- [DYA] GB 2061396 A 19810513 - ROLLS ROYCE
- [A] GB 2226365 A 19900627 - ROLLS ROYCE PLC [GB]
- [A] US 2003146578 A1 20030807 - GIRARD PATRICK JOSEPH MARIE [FR], et al
- [A] US 4242042 A 19801230 - SCHWARZ FREDERICK M [US]
- [A] WO 9525879 A1 19950928 - UNITED TECHNOLOGIES CORP [US]

Cited by

EP1890011A1; WO2008017681A1; EP1739309B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

EP 1580404 A2 20050928; EP 1580404 A3 20081001; EP 1580404 B1 20111005; DE 102004016222 A1 20051006; US 2005254939 A1 20051117; US 2009269190 A1 20091029; US 7524164 B2 20090428

DOCDB simple family (application)

EP 05090065 A 20050316; DE 102004016222 A 20040326; US 45301009 A 20090427; US 8884005 A 20050325