Title (en)

BLADE/DISK DOVETAIL BACKCUT FOR BLADE/DISK STRESS REDUCTION (6FA+e, STAGE 2)

Title (de)

SCHAUFEL/SCHEIBEN-SCHWALBENSCHWANZHINTERSCHNITT FÜR SCHAUFEL/SCHEIBEN-SPANNUNGSREDUZIERUNG (6FA+E, STUFE 2)

Title (fr)

CONTRE-DÉCOUPE EN QUEUE D'ARONDE DE PALE/DISQUE POUR UNE RÉDUCTION DE LA CONTRAINTE PALE/DISQUE (6FA+E, ÉTAPE 2)

Publication

EP 2019913 A4 20110601 (EN)

Application

EP 06759705 A 20060512

Priority

US 2006018473 W 20060512

Abstract (en)

[origin: WO2007133204A1] Blade load path on a gas turbine disk can be diverted to provide a significant disk fatigue life benefit. A plurality of gas turbine blades are attachable to a gas turbine disk, where each of the gas turbine blades includes a blade dovetail engageable in a correspondingly-shaped dovetail slot in the gas turbine disk. In order to reduce gas turbine disk stress, an optimal material removal area is defined according to blade and/or disk geometry to maximize a balance between stress reduction on the gas turbine disk, a useful life of the gas turbine blade, and maintaining or improving the aeromechanical behavior of the gas turbine blade. Removing material from the material removal area effects the maximized balance.

IPC 8 full level

F01D 5/30 (2006.01)

CPC (source: EP)

F01D 5/3007 (2013.01); F05D 2230/10 (2013.01); F05D 2250/193 (2013.01); F05D 2260/941 (2013.01)

Citation (search report)

- [I] EP 0705958 A1 19960410 - GEC ALSTHOM ELECTROMEC [FR]
- [I] GB 2011552 A 19790711 - UNITED TECHNOLOGIES CORP
- [I] GB 2345943 A 20000726 - SINCLAIR GLENN BRUCE [US]
- [I] EP 1584792 A1 20051012 - SIEMENS AG [DE]
- [I] US 2005254953 A1 20051117 - STONE PAUL [CA]
- [I] US 3937593 A 19760210 - JEYES JOHN ANTHONY, et al
- [I] US 5494408 A 19960227 - SEELEY ROBERT E [US], et al
- [I] EP 1219782 A2 20020703 - UNITED TECHNOLOGIES CORP [US]
- [I] DE 19705323 A1 19980827 - SIEMENS AG [DE]
- See references of WO 2007133204A1

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 LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007133204 A1 20071122; CN 101438029 A 20090520; CN 101438029 B 20120530; EP 2019913 A1 20090204; EP 2019913 A4 20110601; JP 2009536994 A 20091022

DOCDB simple family (application)

US 2006018473 W 20060512; CN 200680054572 A 20060512; EP 06759705 A 20060512; JP 2009509530 A 20060512