

Title (en)

TURBINE ENGINE WITH TURBINE HOUSING HAVING AN ABRADABLE LAYER WITH COMPOUND ANGLE, ASYMMETRIC SURFACE AREA DENSITY RIDGE AND GROOVE PATTERN

Title (de)

TURBINENTRIEBWERK MIT TURBINENGEHÄUSE MIT ABREIBBARER SCHICHT MIT ZUSAMMENGESETZTEN ZWEIWINKEL-RIPPEN UND -NUTEN MIT ASYMMETRISCHER FLÄCHENDICHTE

Title (fr)

MOTEUR DE TURBINE AVEC CARTER DE TURBINE COMPRENANT UNE COUCHE ABRADABLE AVEC NERVURES ET RAINURES RECTILIGNES BI-ANGULAIRES AVEC DENSITÉ ASYMÉTRIQUE DE SURFACE

Publication

EP 3111051 A1 20170104 (EN)

Application

EP 15707486 A 20150218

Priority

- US 201414189081 A 20140225
- US 201414189035 A 20140225
- US 201414188992 A 20140225
- US 2015016309 W 20150218

Abstract (en)

[origin: WO2015130522A1] Turbine casing abrasion-resistant component having an abrasion-resistant surface with ridges (1322) projecting from the abrasion-resistant surface, separated by grooves (1328). The ridges have one or both sidewalls (1325, 1326) inclined against the opposing turbine blade tip rotational direction for redirecting and/or dissipating blade tip gap leakage airflow energy. In some embodiments the ridge tip (1324) and/or groove base (1327) have inclined profiles for redirecting airflow leakage away from the blade tip gap. In some embodiments, the inclined ridge tip profile provides a progressive wear zone that increases abrasion-resistant surface area as the inclined ridge is abraded by the rotating blade tip.

IPC 8 full level

F01D 11/12 (2006.01)

CPC (source: EP)

F01D 11/122 (2013.01); **F05D 2240/11** (2013.01); **F05D 2250/181** (2013.01)

Citation (search report)

See references of WO 2015130524A1

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)

WO 2015130522 A1 20150903; CN 106030045 A 20161012; CN 106030045 B 20171003; EP 3111051 A1 20170104; JP 2017509821 A 20170406; JP 6290438 B2 20180307; WO 2015130524 A1 20150903

DOCDB simple family (application)

US 2015016302 W 20150218; CN 201580010564 A 20150218; EP 15707486 A 20150218; JP 2016554227 A 20150218; US 2015016309 W 20150218