Title (en)

FAN CASE REINFORCEMENT IN A GAS TURBINE JET ENGINE

Title (de)

LÜFTERGEHÄUSEVERSTÄRKUNG IN EINEM GASTURBINENTRIEBWERK

Title (fr)

RENFORT DE CARTER DE SOUFFLANTE DANS UN MOTEUR A REACTION A TURBINE A GAZ

Publication

EP 1841950 A2 20071010 (EN)

Application

EP 05858331 A 20051116

Priority

- US 2005041822 W 20051116
- US 2005033564 W 20050920

Abstract (en)

[origin: WO2007035184A2] Described is reinforcement of a fan case in a gas turbine jet engine. In one embodiment, a containment ring and a hear resistance ring are shrink interference fit on the inside diameter of the fan case, the containment ring where the large fan blades turn, and the heat resistance ring where heated air from backfiring heats up the fan case. In one example, the containment ring is made of a sue alloy to provide added strength to the fan case should a fan blade break, containing the fan blade within the fan case. Also, the containment ring may extent forward of at least the leading edge of each fan blade and aft of at least the trailing edge of each fan blade. The heat resistance ring is made of titanium or other suitable material. Additionally, one or more stiffener rings may be shrink interference fit on the outside diameter of the fan case. The containment ring and stiffener rings can reduce the flight weight of the fan case and lower the material costs, while increasing the containment strength of the fan case. Other embodiments are described and claimed.

IPC 8 full level (invention and additional information)

F01D 1/00 (2006.01)

CPC (invention and additional information)

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Citation (search report)

See references of WO 2007035184A3

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

Designated extension state (EPC)

AL BA HR MK YU

EPO simple patent family

WO 2007035184 A2 20070329; WO 2007035184 A3 20070823; WO 2007035184 A8 20070705; WO 2007035184 A8 20080103; AU 2005335919 A1 20070405; BR PI0517330 A 20081007; CA 2584641 A1 20070329; CN 101163863 A 20080416; EP 1841950 A2 20071010; IL 181845 D0 20090211; JP 2009515075 A 20090409; KR 20080034086 A 20080418; RU 2007115082 A 20081027; RU 2406877 C2 20101220; SG 165406 A1 20101028

INPADOC legal status

2012-11-28 [18D] APPLICATION DEEMED TO BE WITHDRAWN
- Effective date : 20120601

2012-07-25 [DAX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)

2009-06-03 [RAP1] TRANSFER OF RIGHTS OF AN APPLICATION
- Owner name : CARLTON FORGE WORKS

2009-06-03 [RIN1] INVENTOR CHANGED BEFORE GRANT
- Inventor name : CARDARELLA, L. JAMES JR.

2008-02-13 [R17D] SEARCH REPORT (CORRECTION)
- Effective date : 20080103

2007-10-10 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20070312

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2007-10-10 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Countries : AL BA HR MK YU