(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 July 2009 (09.07.2009)

PCT

(10) International Publication Number
WO 2009/085467 A8

(51) International Patent Classification:
F01D 11/20 (2006.01) *F04D 29/16* (2006.01)

(21) International Application Number:
PCT/US2008/084315

(22) International Filing Date:
21 November 2008 (21.11.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/966,309 28 December 2007 (28.12.2007) US

(71) Applicant *(for all designated States except US)*: **GENERAL ELECTRIC COMPANY** [US/US]; 1 River Road, Schenectady, NY 12345 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WADIA, Aspi, Rustom** [US/US]; 10003 Morganstrace Drive, Loveland, OH 45140 (US). **CLARK, David, Scott** [US/US]; 6432 Redmont Court, Liberty Township, OH 45044 (US). **LEE, Ching-pang** [US/US]; 12 Camargo Pines Lane, Cincinnati, OH 45243 (US). **BREEZE-STRINGFELLOW, Andrew** [US/US]; 11724 Laurelview Drive, Cincinnati, OH 45249 (US). **MCNULTY, Gregory, Scott** [US/US]; 5704 Beisinger Place, Indianapolis, IN 46237 (US).

(74) Agents: **CONKLIN, Mark, A.** et al.; General Electric Company, Global Patent Operation, Po Box 861, 2 Corporate Drive, Suite 648, Shelton, CT 06484 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,

[Continued on next page]

(54) Title: COMPRESSOR BLADE TIP CLEARANCE CONTROL SYSTEM WITH A PLASMA ACTUATOR, COMPRESSOR AND GAS TURBINE ENGINE WITH SUCH A CONTROL SYSTEM

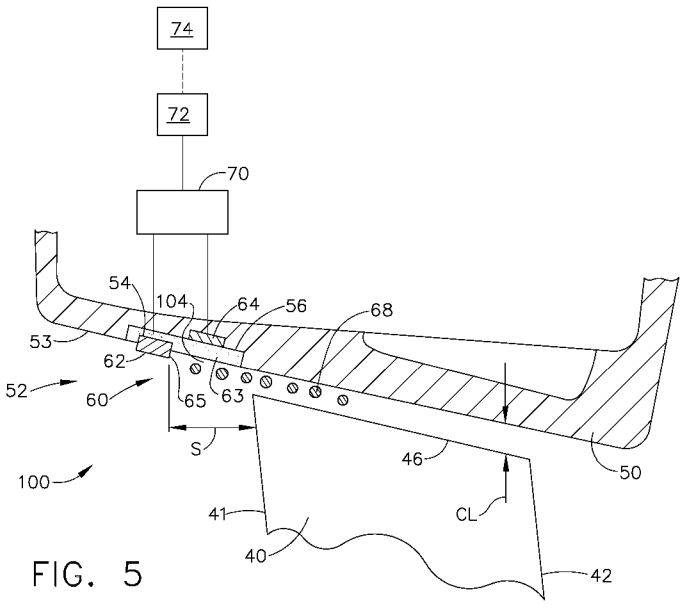

FIG. 5

(57) Abstract: A plasma leakage flow control system for a compressor is disclosed, comprising a circumferential row of compressor blades, an annular casing surrounding the tips of the blades, located radially apart from the tips of the blades and at least one annular plasma generator located on the annular casing. The annular plasma generator comprises an inner electrode and an outer electrode separated by a dielectric material. A gas turbine engine having a plasma leakage flow control system further comprises an engine control system which controls the operation of the annular plasma generator such that the blade tip leakage flow can be changed.

WO 2009/085467 A8

MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *with international search report (Art. 21(3))*

(48) Date of publication of this corrected version:
22 July 2010

(15) Information about Correction:
see Notice of 22 July 2010