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[Continued on next page]

(54) Title: ROTORS WITH MODULUS MISTUNED AIRFOILS

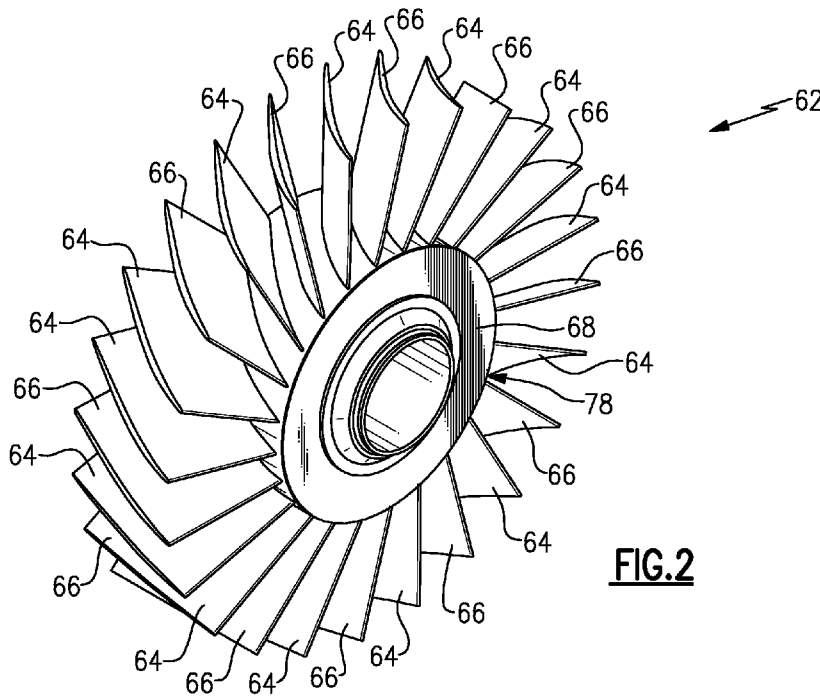


FIG. 2

(57) Abstract: A rotor assembly for a gas turbine engine includes a rotor defining an outer periphery; and a plurality of blades attached to the outer periphery. The plurality of blades includes a material property different than the other of the plurality of blades to provide mistuning of the rotor.





TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

— upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)

Published:

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/033407**A. CLASSIFICATION OF SUBJECT MATTER****F01D 5/00(2006.01)i, F01D 5/02(2006.01)i, F01D 5/14(2006.01)i, F01D 5/30(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F01D 5/00; F01D 25/24; G01M 15/14; F01D 5/26; B30B 15/00; F01D 5/14; F01D 11/00; F01D 5/30; F01D 5/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: gas turbine, rotor, blade, material property, different, slot, and root

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2012-0237355 A1 (ZHANG et al.) 20 September 2012 See paragraphs [0022]-[0024]; and figures 1-2.	1-26
Y	US 2009-0104030 A1 (MCMILLAN, ALISON JANE) 23 April 2009 See paragraph [0029]; claim 2, and figure 1.	1-26
A	US 8,382,436 B2 (AMMANN, LUKE J.) 26 February 2013 See column 4, lines 5-30; and figure 3.	1-26
A	US 2010-0124502 A1 (BRANDL et al.) 20 May 2010 See paragraph [0063]; and figures 4-6.	1-26
A	US 7,824,158 B2 (BAUER et al.) 02 November 2010 See column 3, lines 10-58; and figure 1.	1-26

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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Date of the actual completion of the international search

26 January 2015 (26.01.2015)

Date of mailing of the international search report

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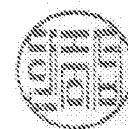
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2014/033407

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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