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(54) Title: COOLING HOLE WITH ASYMMETRIC DIFFUSER

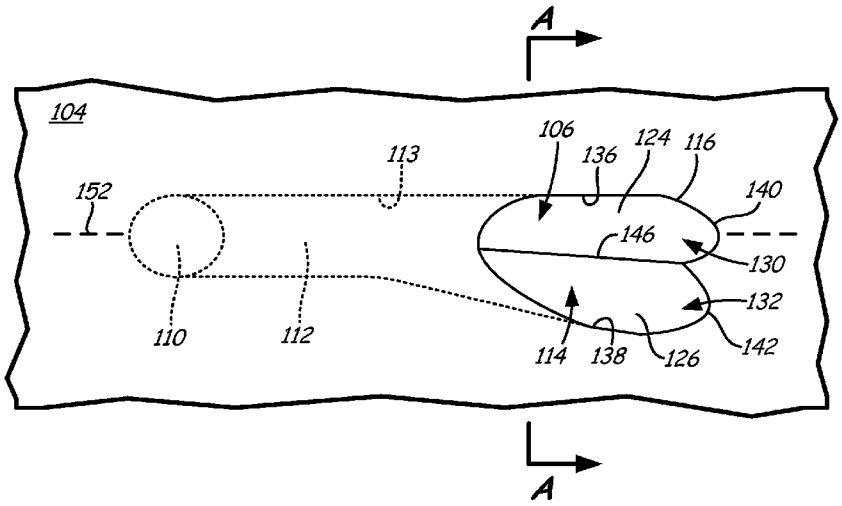


Fig. 5

(57) Abstract: A gas turbine engine component includes a wall having first and second wall surfaces and a cooling hole extending through the wall. The cooling hole includes an inlet located at the first wall surface, an outlet located at the second wall surface, a metering section extending downstream from the inlet and a diffusing section extending from the metering section to the outlet. The diffusing section includes a first lobe diverging longitudinally from the metering section and a second lobe adjacent the first lobe and diverging longitudinally and laterally from the metering section.

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A. CLASSIFICATION OF SUBJECT MATTER

F02C 7/18(2006.01)i, F01D 25/12(2006.01)i, F02K 3/00(2006.01)i, F01D 5/08(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)
F02C 7/18; F03B 11/00; F01D 1/00; F01D 5/18; B23H 9/14; F01D 25/12; F02K 3/00; F01D 5/08

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 engine component, wall, cooling hole, inlet, outlet, metering section, diffusing section, lobe, and ridge

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0003096 A1 (KOHLI, ATUL et al.) 03 January 2008 See paragraphs [0009],[0022]-[0023],[0026],[0028] and figures 3-4.	1-2,4-12,21-22
Y		3,13-20
Y	US 2005-0286998 A1 (LEE, CHING-PANG et al.) 29 December 2005 See paragraphs [0037],[0040] and figures 2-4.	3,13-20
A	US 8057181 B1 (LIANG, GEORGE) 15 November 2011 See column 4, lines 11-43 and figures 1-3.	1-22
A	US 2010-0068068 A1 (LIANG, GEORGE) 18 March 2010 See paragraphs [0031],[0035]-[0036] and figures 4-5, 7.	1-22
A	US 2006-0163211 A1 (PIETRASZKIEWICZ, EDWARD F. et al.) 27 July 2006 See paragraphs [0020]-[0022] and figures 2B-2C.	1-22

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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