

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 October 2006 (12.10.2006)

PCT

(10) International Publication Number
WO 2006/107828 A3

(51) International Patent Classification:

- F02B 33/44 (2006.01) F02C 6/00 (2006.01)
- F02B 53/04 (2006.01) F02C 5/02 (2006.01)
- F02B 37/10 (2006.01) F02C 9/00 (2006.01)
- F02B 29/00 (2006.01) F02C 7/22 (2006.01)
- F02B 75/02 (2006.01) F02C 7/26 (2006.01)
- F01C 3/02 (2006.01) F02G 1/00 (2006.01)
- F01C 1/08 (2006.01) F02G 3/00 (2006.01)
- F01C 1/24 (2006.01) F02D 23/00 (2006.01)
- F04C 2/00 (2006.01) H01M 8/04 (2006.01)
- H01M 8/12 (2006.01)

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

(21) International Application Number:

PCT/US2006/012221

(22) International Filing Date: 4 April 2006 (04.04.2006)

(25) Filing Language: English

(26) Publication Language: English

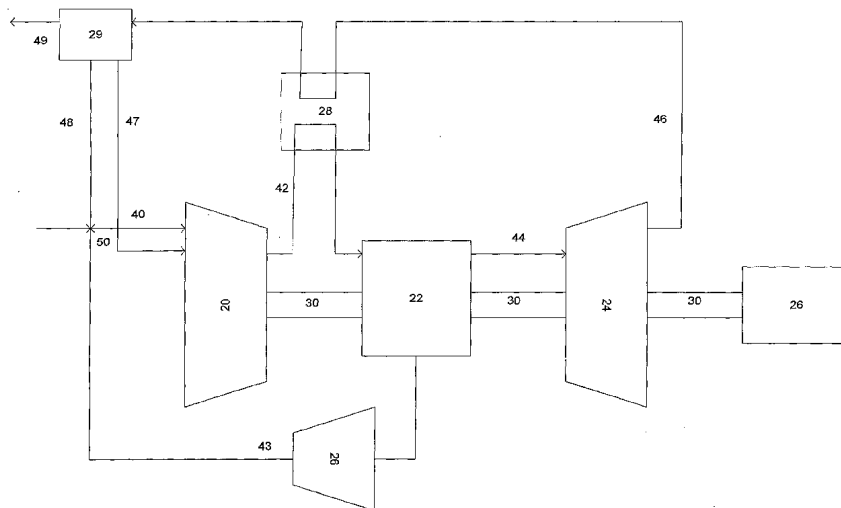
(30) Priority Data:

11/099,217 5 April 2005 (05.04.2005) US

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[Continued on next page]

(54) Title: TOROIDAL INTERSECTING VANE GAS MANAGEMENT SYSTEM



THE FIGURE

(57) Abstract: The invention relates to the discovery that employing a toroidal intersecting vane machine (TIVM) within the internal combustion engine provides substantial improvements in controlling pressure, air pressure and air flow into an engine, while maintaining a simplified mechanical system and providing a compressor with little or no parasitic load on the engine. This invention covers the use of the TIVM for the purpose of providing this control.

WO 2006/107828 A3



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

Published:

— *with international search report*

(88) Date of publication of the international search report:

16 April 2009

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/12221

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: Please See Continuation Sheet

 USPC: Please See Continuation Sheet
 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)
 U.S. : Please See Continuation Sheet

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category.*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,644,012 B2 (HOFFMANN et al.) 11 November 2003 (11.11.2003), figures 1-2, column 3, lines 60-61.	1-67
Y	DE 3804013A1 (GUTFLEISCH) 9 February 1989 (09.02.1989), figures 1-2.	1-4, 10-13, 21-31, 33-34, 36, 38-42, 44-45, 54, 57, and 59-67
Y	US 5,233,954 A (CHOMYSZAK) 10 August 1993 (10.08.1993), figures 1-9, column 4, lines 18-68, columns 5-6, lines 1-68, and column 7, lines 1-25.	1-67
Y	US 7,007,487 B2 (BELOKON et al.) 07 March 2006 (07.03.2006), figure 1, column 5, lines 49-67, and column 6, lines 1-29.	16-17, 19-21, 23-24, 31-32, 35, 43, 48-49, and 51-54
Y	US 6,173,562 B1 (UTAMURA et al.) 16 January 2001 (16.01.2001), figure 1, column 5, lines 9-19.	21 and 54

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

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"P" document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search
 13 February 2008 (13.02.2008)

Date of mailing of the international search report
 28 FEB 2008

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/12221

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,271,215 A (GUILLET) 21 December 1993 (21.12.1993), figure 1.	26
Y	US 4,282,713 A (ANTOKU et al.) 11 August 1981 (11.08.1981), figure 1, column 3, lines 47-56.	63 and 64
Y	US 4,426,842 A (COLLET) 24 January 1984 (24.01.1984), figure 1-2.	65
Y	US 3,513,929 A (DAE SIK KIM) 26 May 1970 (26.05.1970) figures 1 and 3, column 6, lines 36-75, and column 7, lines 1-12.	66-67

Continuation of B. FIELDS SEARCHED Item 1:

60/600, 606, 607, 608, 609, 39.182, 39.183, 39.5, 39.511, 39.34, 39.59, 39.181, 39.15, 777, 776, 773; 123/221; 418/207, 195; 429/26

Continuation of IPC:

F02B 33/44(2006.01),**53/04**(2006.01),**37/10**(2006.01),**53/00**(2006.01),**29/04**(2006.01),**75/02**(2006.01);**F01C 3/02**(2006.01),**1/08**(2006.01),**1/24**(2006.01);**F04C 2/00, 18/00;F02C 6/00**(2006.01),**5/02**(2006.01),**9/00**(2006.01),**7/22**(2006.01),**7/26**(2006.01);**F02G 1/00**(2006.01),**3/00**(2006.01);**F02D 23/00**(2006.01);**H01M 8/04**(2006.01),**8/12**(2006.01)

Continuation of USPC:

60/600,606,607,608,609,39.182,39.183,39.5,39.511,39.34,39.59,39.181,39.15,777,776,773;123/221;418/207,195;429/26