



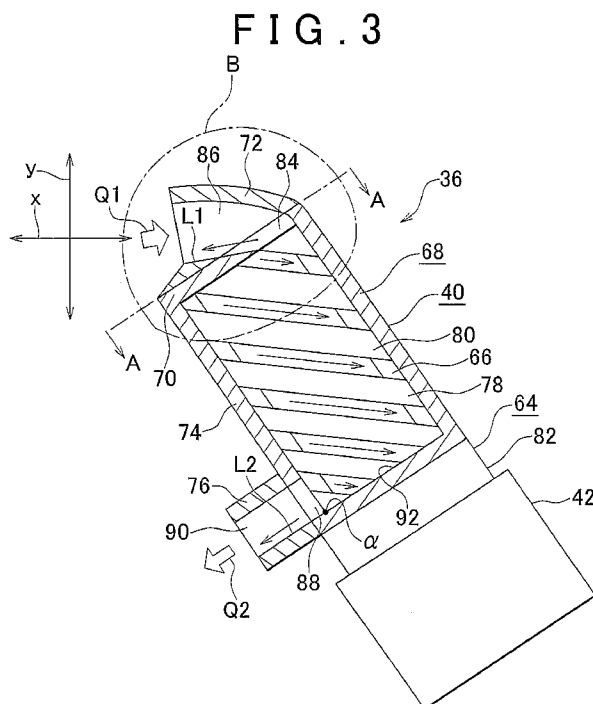
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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Published:
— with international search report (Art. 21(3))

[Continued on next page]

(54) **Title:** FLUID COMPRESSOR AND FUEL CELL VEHICLE



(57) **Abstract:** An air compressor (36) as a fluid compressor includes: a suction port (84) and a delivery port (88) provided at upper and lower portions, respectively, of a pump chamber (66); a suction passage (86) in communication with the inside of the pump chamber (66) via the suction port (84); a delivery passage (90) in communication with the inside of the pump chamber (66) via the delivery port (88); and a driving rotor (78) and a driven rotor provided in the pump chamber (66). At least a part of the suction passage (86) is located below the suction port (84).

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
12 May 2011

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2010/000867

A. CLASSIFICATION OF SUBJECT MATTER INV. F04C29/00 F04C29/12		
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) F04C F01C		
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 practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 340 916 A2 (TEIJIN SEIKI CO LTD [JP]) 3 September 2003 (2003-09-03) the whole document	1-12,15, 16
X	JP 2003 090292 A (EBARA CORP) 28 March 2003 (2003-03-28) the whole document	1-12,15, 16
X	JP 2006 170139 A (TOYOTA IND CORP) 29 June 2006 (2006-06-29) the whole document	1-3, 5-10,12, 15,16
X	US 1 769 153 A (WARREN MEYER WILLIAM) 1 July 1930 (1930-07-01) the whole document	1-12,15, 16
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 3 December 2010		Date of mailing of the international search report 15/03/2011
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Sbresny, Heiko

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/000867

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

"see additional sheet(s)"

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2010/000867

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 1 635 271 A (HOWARD HAPGOOD CYRUS) 12 July 1927 (1927-07-12) the whole document -----	1-12,15, 16
Y	US 2005/112014 A1 (SHIROMARU KATSUTOSHI [JP] ET AL) 26 May 2005 (2005-05-26) the whole document -----	1-12,15, 16
A	US 2008/044275 A1 (FUJII TOSHIRO [JP]) 21 February 2008 (2008-02-21) the whole document -----	1-12,15, 16
A	EP 1 479 913 A2 (TOYOTA JIDOSHOKKI KK [JP]) 24 November 2004 (2004-11-24) the whole document -----	1,3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2010/000867

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1340916	A2	03-09-2003	CN 1441168 A 10-09-2003
			TW 277694 B 01-04-2007
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			JP 2008038726 A 21-02-2008

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			KR 20040100936 A 02-12-2004
			TW 239371 B 11-09-2005
			US 2004241027 A1 02-12-2004

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 15, 16

A suction and discharge port and passage assembly of a compressor in order to reduce the amount of water or ice entering the pump chamber of the compressor through either of these ports

2. claims: 13, 14

A method for operating a compressor in order to drive out water which has collected inside the pump chamber of the compressor
