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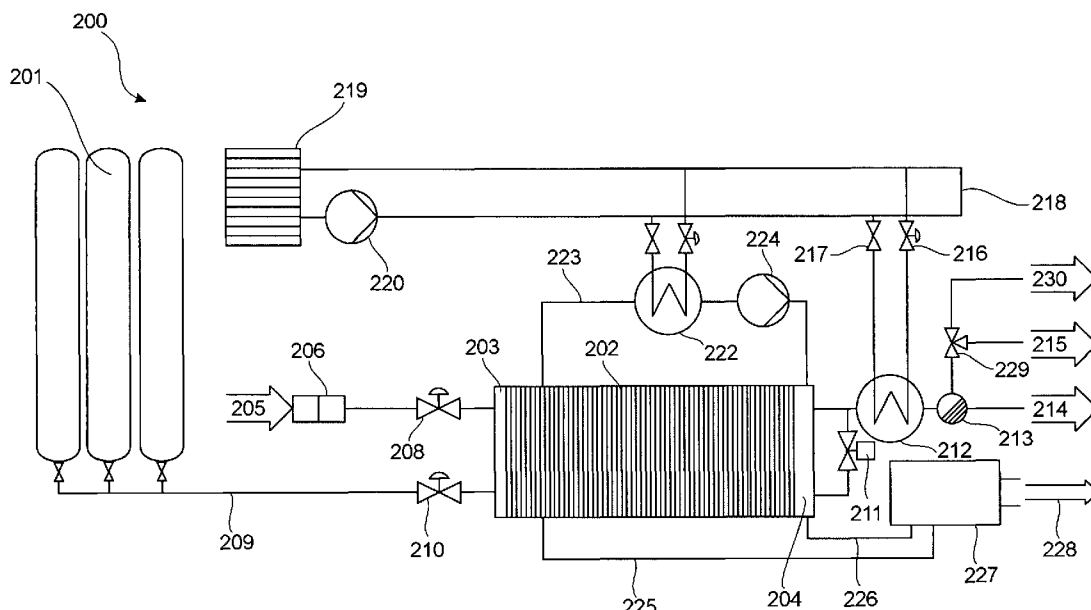
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: FUEL CELL SYSTEM FOR SUPPLYING AIRCRAFT



(57) Abstract: A fuel cell system for aircraft with a passenger cabin comprises a fuel cell. The fuel cell comprises a first inlet connection, a first outlet connection, a cathode side and an anode side, wherein the first inlet connection is formed as the inlet connection of the cathode side and wherein the first outlet connection is formed as the outlet connection of the cathode side. In addition, the fuel cell system is designed in such a way that at the first inlet connection, a gas with a pressure is applied, which corresponds to an air pressure in the passenger machine.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010287

A. CLASSIFICATION OF SUBJECT MATTER
 INV. H01M8/04 H01M8/02 H01M8/24 H01M8/00
 ADD. H01M8/08 H01M8/10

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)
H01M

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 1 357 625 A (AIRBUS GMBH [DE]) 29 October 2003 (2003-10-29) claim 10	1-7,9, 11,12, 15,16, 22-26
Y	-----	8,10
Y	US 6 387 556 B1 (FUGLEVAND WILLIAM A [US] ET AL) 14 May 2002 (2002-05-14) claims 16,17	8
Y	DE 101 23 579 A1 (ANGEWANDTE TECHNIK MBH GREIFSW [DE]) 21 November 2002 (2002-11-21). abstract	10
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Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 8 May 2007	Date of mailing of the international search report 13/07/2007
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Reich, Claus
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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 102 49 588 A1 (AIRBUS GMBH [DE]) 13 May 2004 (2004-05-13) paragraph [0008]	1-12, 15, 16, 22-26
A	US 2004/043276 A1 (HOFFJANN CLAUS [DE] ET AL) 4 March 2004 (2004-03-04) claims 39-41	1-12, 15, 16, 22-26
A	EP 1 535 841 A (AIRBUS GMBH [DE]) 1 June 2005 (2005-06-01) the whole document	1-12, 15, 16, 22-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/010287

Box 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 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 fee, this Authority did not invite payment of any additional fee.

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.:

1-12, 15(part), 16(part), 22(part), 23(part), 24, 25(part), 26(part)

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

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(part),16(part),22(part),
23(part),24,25(part),26(part)

Fuel cell system for an aircraft with a passenger cabin; aircraft having said fuel cell system; and use of said fuel cell system in an aircraft, wherein the fuel cell system comprises a fuel cell, wherein the fuel cell comprises: a first inlet connection, a first outlet connection, a cathode side and an anode side, wherein the first inlet connection is formed as an inlet connection of the cathode side, wherein the first outlet connection is formed as an outlet connection of the cathode side and wherein the fuel cell system is designed in such a way that at the first inlet connection, a gas with a pressure is applicable, which corresponds with an air pressure in the passenger cabin.

Method for operating said fuel cell system in an aircraft, wherein the method comprises: placing a negative pressure on the outlet connection of the fuel cell and suctioning gas into the cathode side of the fuel cell by the negative pressure.

1.1. claims:

8-11,15(part),16(part),22(part),
23(part),25(part),26(part)

wherein the stack comprises a plurality of partial units, wherein each partial unit comprises a regulating valve, which is designed in such a way that a gas supply to the partial units is individually controllable.

1.2. claims:

12,15(part),16(part),22(part),
23(part),25(part),26(part)

wherein the stack comprises inner guide elements.

2. claims:

13,14,15(part),16(part),22(part),
23(part),25(part),26(part)

wherein the fuel cell system further comprises a tie rod, wherein the tie rod is designed in such a way that by the tie rod, the stack is braceable.

3. claims: 17-19,22(part),23(part),25(part),26(part)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

wherein the fuel cell system further comprises a heating element, wherein the heating element is designed in such a way that by the heating element, the fuel cell is heatable.

4. claims: 20,21,22(part),23(part),25(part),26(part)

wherein the fuel cell comprises a bipolar plate, which bipolar plate comprises as a material a conductive plastic.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/EP2006/010287

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1357625 A	29-10-2003	JP 2003331877 A	21-11-2003
US 6387556 B1	14-05-2002	US RE39556 E1	10-04-2007
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