

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2007/055286

International filing date (day/month/year)
31.05.2007

Priority date (day/month/year)
02.06.2006

International Patent Classification (IPC) or both national classification and IPC
INV. B64C1/14

Applicant
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1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Date of completion of
this opinion

see form
PCT/ISA/210

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>5,15</u>
	No: Claims	<u>1-4,6-14,16,17</u>
Inventive step (IS)	Yes: Claims	<u>5</u>
	No: Claims	<u>1-4,6-17</u>
Industrial applicability (IA)	Yes: Claims	<u>1-17</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V.

1 Reference is made to the following documents:

D1: FR-A-1 497 214 (HERTEL HEIRICH) 6 October 1967 (1967-10-06)

D2: US-A-2 327 636 (GERBER JOHN) 24 August 1943 (1943-08-24)

2 INDEPENDENT CLAIMS

2.1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document):

fuselage structure of an aircraft or spacecraft comprising: an inner shell arrangement (10) which has an upper inner shell (1) and a lower inner shell (2), the upper inner shell (1) being spaced apart at least in some sections from the lower inner shell (2) by a first gap in order to form a window region; and a window band (11) which is arranged at least in the window region and has a pane device which comprises a grid structure (13) which absorbs fuselage forces.

2.2. Document D2 (see in particular claim 1, figures 1 and 2) discloses also a device with all the features of claim 1.

2.3. With reference to method claim 10, the subject-matter of method claim 10 is also disclosed in document D1, see point 2.1. above.

3. DEPENDENT CLAIMS

3.1. Dependent claims 2-4, 6-9 and 11-17 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step, see document D1 and the passages cited in the international

search report.

3.2. In particular, with reference to claim 2, see D1, figures 2 and 3, where sandwich panels (1) and (2) are disclosed.

3.3. With reference to claim 15, adhesive bonding is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to realize a structural connection in the field of aeronautics; therefore the subject-matter of claim 15 does not involve an inventive step in the sense of Article 33(3) PCT.

3.4. The combination of the features of dependent claim 5 is neither known from, nor rendered obvious by, the available prior art, as no prior art document discloses a fuselage structure in which the grid structure extends beyond the window region, which is formed by the first and second gaps, into the shell arrangements and can be fastened to the individual shells of the shell arrangements in order to form a fuselage structure which connects the individual shells to one another.

3.5. the problem solved by this special technical feature may be regarded as providing a fuselage structure without the weight of windows frames and integrating the window band in a sandwich panels fuselage construction.

3.6. As none of the prior art documents discloses such a lay-out for a fuselage structure, the present application meets the requirements of Article 33(1) PCT, because the subject-matter of claim 5 is new in the sense of Article 33(2) PCT, and these features are also not suggested by any prior art document.

4. INDUSTRIAL APPLICABILITY

The subject-matter of claims 1-17 can be manufactured in industry, and thus looked upon as being industrially applicable.

Re Item VII

Certain defects in the international application

5. Independent claim 1 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

5.1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.
