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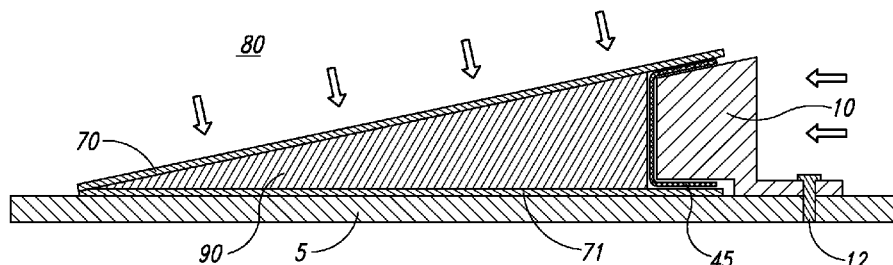


Fig. 1

(57) Abstract: The present disclosure provides an apparatus and method for forming a composite structure (200). The apparatus comprises a bond assembly jig (100) having a support plate (105), an anchor member (110) attached to the support plate (105), and a block member (140) connected to the anchor member (110) such that the block member (140) is permitted to move in a vertical direction. The bond assembly jig (100) can be arranged within an autoclave and may further comprise a shroud (160) that is arranged to shield the anchor member (110) and the block member (140) from the pressures exerted within the autoclave. The method (300) is accomplished by assembling the anchor member (110) and block member (140) on the support plate (105), arranging the composite materials, placing a caul component (195) over the composite materials and a shroud (160) over the anchor member (110) and block member (140), and applying heat and pressure to the bond assembly jig (100) to cure the composite materials.



INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
 INV. B29D99/00 B29C70/44 B29C33/30 B25B11/02
 ADD.
 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)
 B29D B29C B25B

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)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 418 843 A1 (FUJI HEAVY IND LTD [JP]) 27 March 1991 (1991-03-27) figure 4 column 4, lines 48-53	1,2,4
X	DE 10 2008 001498 B3 (AIRBUS GMBH [DE]) 27 August 2009 (2009-08-27) figures 7a-7h page 5, paragraph [0045]	7-9, 12-16
X	WO 98/46419 A1 (SIKORSKY AIRCRAFT CORP [US]) 22 October 1998 (1998-10-22) figures 1, 4, 5, 6, 7 page 1, lines 5-7 page 10, lines 21-24 page 14, lines 17-18 page 18, lines 18-19 page 19, lines 5-9, 29-31 page 20, lines 4, 12-14, 20-22	3,5-20

Further documents are listed in the continuation of Box C.

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 application or patent 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 2 April 2014	Date of mailing of the international search report 11/04/2014
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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, Fax: (+31-70) 340-3016	Authorized officer Gasner, Benoit
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/056028

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.:

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.

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, 2, 4

An assembly jig for forming composite materials into a structure, comprising:
a support plate having a support surface;
an anchor member having a base section that is removably fastened to said support surface, and a protruding section that extends from said base section, the protruding section having a first side and a second side;
a block member that is attached using a t-slot to the first side of the protruding section of the anchor member in a manner that allows the block member to travel in a direction that is substantially perpendicular to the support surface.

2. claims: 3, 5-20

An apparatus and a method for assembling and curing a structure formed from composite materials, comprising:
a support plate having a support surface on which the composite materials may be placed;
an anchor member having a base section that is removably fastened to said support plate, and a protruding section that extends from said base section, the protruding section having a first side and a second side;
a block member attached to the first side of the protruding section of the anchor member; and
a shroud that is removably fastened to the support plate and extending from the support plate such that said shroud covers at least a portion of the anchor member.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/056028

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