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(54) Title: METHOD OF PRODUCING COMPOSITE MEMBERS HAVING INCREASED STRENGTH

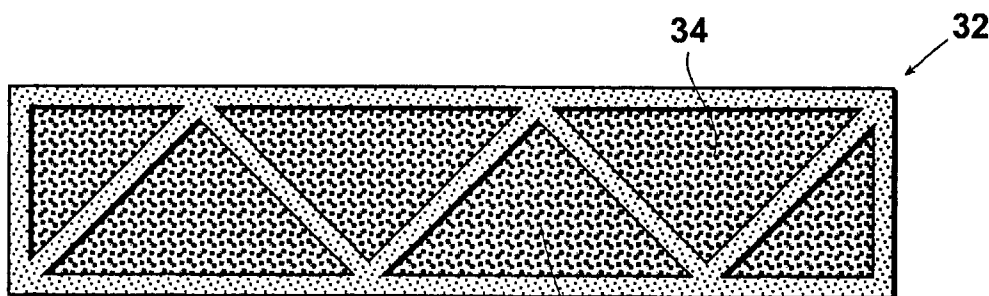


Fig. 4

(57) Abstract: This invention relates to extruded composite materials specifically focusing on the increasing load bearing capacity and the overall strength of composites. Injectable conformable structural core materials are used to replace foam cells inside extruded composite materials thereby increasing the overall load bearing stability and strength. The core materials are tailored to have a desired CTE with respect to the structural materials. The core materials may also incorporate fibers and solid structural fillers for increasing the strength of the composite member. The objective is to enable composite materials to have the highest structural load bearing capability possible so that these technologies can be used as the replacement of wood, in aerospace applications and for other purposes.

WO 2008/024107 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/032674

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B29C47/06 B29C44/22

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)

B29C

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, 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	US 4 281 492 A (SCHOCK KARL ET AL) 4 August 1981 (1981-08-04) column 2, line 29 - line 56 column 3, line 57 - column 4, line 21 claims; figures	1-4,6,7, 10-13,22
Y		8,9,17, 18
X	US 2004/148965 A1 (HUTCHISON HERBERT L [US] ET AL) 5 August 2004 (2004-08-05) paragraph [0024] - paragraph [0025] paragraph [0035] - paragraph [0037] claims 1,4,5; figures 1,2,9	1,4-7, 13-16
Y		2,3
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Further documents are listed in the continuation of Box C.



See patent family annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
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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.
Y	US 6 818 163 B1 (FIBIGER RICHARD F [US] ET AL) 16 November 2004 (2004-11-16) column 6, line 53 - line 56 column 7, line 7 - line 15 -----	2,3
Y	WO 2005/044536 A (STRANDEX CORP [US]; LAVER TERRY C [US]; KELLER BRIAN [US]; ENGLAND ALF) 19 May 2005 (2005-05-19) page 13, line 1 - line 10; figures 2,10 -----	8,9,17, 18
A	DE 15 04 444 B1 (KAWAMURA YUZO [JP]; TOKAN KOGYO CO LTD [JP]) 16 March 1972 (1972-03-16) column 4, line 16 - line 24 figures 5,10-12 -----	1-18,22
A	DE 11 54 264 B (REIFENHAEUSER KG) 12 September 1963 (1963-09-12) column 3, line 12 - line 26 claims; figures 1-3. -----	1-18,22

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/032674

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 allsearchable 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 reportcovers 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- 18, 22

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: 1-18,22

Method of making an extruded filled composite member

2. claims: 19-21

Method of making an extruded member

3. claims: 23-25

Method of applying a particle coating to an extruded member

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/032674

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