Title: SYSTEM AND METHOD FOR THE PRESERVATIVE TREATMENT OF ENGINEERED WOOD PRODUCTS

Abstract: Methods of making a wood enhancement agent treated engineered wood product. The wood enhancement agent includes at least one of a preservative, a water repellent, a fungicide, an insecticide, a stabilizing agent, wax, an ultra-violet light inhibitor, and combinations thereof, and may also include an antioxidant. The wood enhancement agent is incorporated into the engineered wood product during a billet making process or after forming the billet. The wood enhancement agent may be applied simultaneously with a bonding agent or at a later time, for example applied to a scrim log mat during a pre-press process or inside a steam press chamber. Alternatively, the wood enhancement agent may be applied to a warm billet after steam press, or to a reheated billet, by dipping, spraying, flood coating, diffusion, vacuum impregnation, pressure, or a combination thereof.
INTERNATIONAL SEARCH REPORT

A  CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B27N 3/00; B32B 21/04; B27K 3/15 (2007 10)
USPC - 428/537 1, 264/109, 428/541
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)
IPC(8) - B27N 3/00, B32B 21/04, B27K 3/15 (2007 10)
USPC - 428/537 1, 264/109, 428/541

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC(8) - B27N 3/00, B32B 21/04, B27K 3/15 (2007 10) (see keyword below)
USPC - 428/537 1, 264/109, 428/541, 208/2, 252/607 (see keyword below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST/USPT,PGPB,EPAB,JPAB), DIALOGPRO/Eng nec fang), Google Scholar
Search Terms: treatment, wood, scrim, mat, bonding, agent, steam, press, pre-press, lay-up, billet, engineered, strand, antioxidant, drying, chamber, enhancement, binding, adhesive, wax, stabilizer, fungicide, insecticide

C  DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 2005/0037202 A1 (HEJNA et al.) 17 February 2005 (17 02 2005) entire document especially fig 1-2, table 1-4, para [0014], [0016]-[0017], [0028]-[0030], [0034]-[0035], [0043], [0061], [0065], [0067], [0072]-[0073], [0081]-[0088], [0106]-[0107], [0109]-[0120], [0122], [0127]-[0128]</td>
<td>30-34</td>
</tr>
<tr>
<td>Y</td>
<td>US 6,344,165 B1 (COLEMAN) 5 February 2002 (05 02 2002) entire document especially fig 1, col 3 In 8-29, 42-50, 63-65, col 4 In 9-17, col 5 In 1-19, 26-40, col 6 In 27-46, col 7 In 4-6</td>
<td>10</td>
</tr>
</tbody>
</table>

D  Further documents are listed in the continuation of Box C

* 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
31 October 2007 (31 10 2007)

Date of mailing of the international search report
21 DEC 2007

Name and mailing address of the ISA/US
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Authorized officer
Lee W Young

PCT H [Ip 1140 571 273-4300]
PCT US P 571 275-774

Form PCT/ISA/210 (second sheet) (April 2007)
**INTERNATIONAL SEARCH REPORT**

**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

Group I claims 1-15 and 30-34 are directed to a wood product comprising  
- a reconstituted wood product comprising scrim fiber strands, and  
- a wood enhancement agent distributed in the scrim fiber strands, wherein the wood enhancement agent is distributed in the scrim fiber strands of the scrim log material mat before the scrim log material mat is subjected to a steam press process

Group II claims 16-29 and 36-40 are directed to a wood product comprising  
- a reconstituted wood product comprising scrim fiber strands, and  
- a wood enhancement agent distributed in the scrim fiber strands, wherein the wood enhancement agent is applied to a warm billet after the billet is formed by a steam press process

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 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 1-15 and 30-34

**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

Form PCMS A/2 10 (continuation of first sheet (2)) (April 2007)