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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
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(54) Title: METHODS FOR BONDING STRUCTURAL ELEMENTS OF PAPER MACHINE AND INDUSTRIAL FABRICS TO ONE ANOTHER AND FABRICS PRODUCED THEREBY

(57) Abstract: A method of manufacturing and a papermaker's or industrial fabric, which includes the application of a polymeric resin material onto preselected discrete locations on a base substrate in a controlled manner in droplets having an average diameter of 10 μ (10 microns) to point bond yarns, bond spiral wound strips together or to bond layers of a fabric together.

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INTERNATIONAL SEARCH REPORT

International Application No
PC/US 03/35472

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 D06N7/00 D21F1/00 D21F7/08 D21F7/10 B32B7/14 B32B5/02		
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 7 D06N D21F D04H		
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 A	US 3 994 662 A (BRAMLEY ANTHONY) 30 November 1976 (1976-11-30) abstract column 2, line 45 - line 49 -----	17,19 1-16, 37-51
X A	US 3 501 366 A (BRAMLEY ANTHONY ET AL) 17 March 1970 (1970-03-17) column 1, line 45 - line 55; claims 1,5; figures column 4, line 17 - line 36	17,19 1-16, 37-51
A	----- GB 1 053 282 A (THE LINDSAY WIRE WEAVING COMPANY) 30 December 1966 (1966-12-30) page 1, line 16 - line 23; claims 1,6,8 ----- -/--	17,19
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in 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 document 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 23 April 2004	Date of mailing of the international search report 12 02 2004	
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 Pamies Ollie, S	

INTERNATIONAL SEARCH REPORT

International Application No

PC/US 03/35472

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 149 003 A (CHRISTIE DONALD R ET AL) 15 September 1964 (1964-09-15) column 1, line 16 - line 35 column 2, line 55 - line 58 column 8, line 37 - line 57 -----	17,18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/35472

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 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.:

1-19, 37-51 (partly)

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: 1-19,37-51 (partly)

The method and fabric characterised in that the fabric has yarns that crossover one another at discrete crossover locations in a woven or non-woven pattern and the discrete deposits of polymer are applied at a plurality of preselected crossover locations.

2. claims: 20-36

The method and fabric of characterised in that the fabric comprises fabric strips having a lateral fringe comprising yarns that extend beyond a lateral edge wherein lateral edges of adjacent turns of fabric strip abut one another with the lateral fringe overlying the adjacent strip and the discrete deposits of polymer are applied at a plurality of preselected locations on the lateral fringe where yarns of the lateral fringe overlap with yarns in an adjacent strip.

3. claims: 52-58, 37-51(partly)

The method and fabric characterised in that the fabric with the discrete deposits of polymer applied on it at a plurality of preselected locations is bonded to another layer at said discrete locations.

4. claims: 59,60

The fabric characterised in that the fabric comprises a yarn array with the discrete deposits of polymer applied on it at a plurality of preselected locations.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/35472

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