

EUROPEAN PATENT APPLICATION

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Method of manufacture of highly reflective metallized paper.

Coated paper substrates having a high gloss suitable for vacuum metallization are manufactured by a direct coating method which comprises laminating an interleaving film and the thermoplastic resin-coated surface of a paper substrate employing suitable temperatures and pressure to render the thermoplastic flowable and thereafter nonflowable. The interleaving film is then stripped away leaving the resin-coated paper substrate with a high specular gloss which can thereafter be vacuum metallized.

Similar high gloss paper substrates are also provided by a transfer coating process which comprises laminating a paper substrate and the thermoplastic resin-coated surface of a transfer film employing sufficient temperatures and pressure to first render the thermoplastic resin flowable and then nonflowable and thereafter stripping away the transfer film.

Paper substrates having 75° specular gloss readings of at least 85 prepared by a process of this

invention are then vacuum metallized resulting in the manufacture of highly reflective metallized paper.

EP 0 267 395 A3



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	FR-A- 994 139 (G.H. GILLOT) * Summary * --	1,7	D 21 H 1/48 D 21 H 1/18 D 21 H 5/00
X	FR-E- 56 065 (G.H. GILLOT) * Summary 1°a-c * --	1,7	
A	US-A-3 113 888 (S. GOLD et al.) * Column 2, lines 23-72; column 3, lines 1-8,47-57,66-75; column 4, column 5, lines 1-10; examples I-VI * --	1,3,8,18,20	
A	FR-A-2 286 162 (N. SEGARD) * Figure; claims 1,5-7; example 2 * --	1,3,5-7	
X,Y	GB-A-1 556 805 (TOYO ALUMINIUM) * Figures 1-4,7-9; page 1, line 29 - page 3, line 9; examples 1,2 * --	9,10,12-20	TECHNICAL FIELDS SEARCHED (Int. Cl.4) D 21 H
Y	US-A-4 388 137 (W.H.McCARTY et al.) * Claims 1,2,5-9,12; column 2, last paragraph; column 10, line 23 - column 11, line 3 * --	9,12-20	
A	GB-A-1 305 043 (COMPLEMENTOS INDUSTRIALES)		
A	GB-A- 784 637 (BUNTPAPIERFABRIK AG) ./.		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 09-06-1988	Examiner NESTBY
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,
namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,

namely:

1. Claims 1-8: A direct coating process for the manufacture of a high gloss paper; a highly reflective metallized paper substrate prepared by vacuum metallizing this high gloss paper
Claims 18a;19,20 both latter relating to 18a.
2. Claims 9-17: A transfer coating process for the manufacture of a high gloss paper; a highly reflective metallized paper substrate prepared by vacuum metallizing this high glosspaper
3. Claims 18b;19,20 both later relating to 18b

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,
namely claims: 1-17,18a and 19,20 partially
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,
namely claims:



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	ABSTRACT BULLETIN OF THE INSTITUTE OF PAPER CHEMISTRY, vol. 52, no. 5, November 1981, page 588, abstract no. 5417 Appleton, Wisconsin, US & JP-A-81 37 398 (K. MURASE) 11-04-1981		
A	GB-A-1 413 656 (STAR PAPER)		
A	US-A-4 112 192 (J.H. VREELAND)		
A	US-A-3 028 258 (J.C. RICE)		
A	US-A-4 434 259 (S. GOLD et al.)		

			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	