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54 **Process for the manufacture of paper, paper additive composition and paper of improved surface properties.**

57 This invention discloses a process for the manufacture of paper having retained therein high levels of starch wherein such starch is a specially treated, cooked, cross-linked starch which is added with a polyelectrolyte at the wet end of the paper manufacturing process or sprayed on the web in the paper-forming process. The invention also relates to a novel wet-end paper additive composition which includes the specially treated, cooked, cross-linked starch and a polyelectrolyte and the improved paper produced therefrom.



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. 2)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<p><u>GB - A - 1 110 004</u> (BASF)</p> <p>* Page 1, lines 10-14, 49-74; page 2, lines 1-85; claims 1-7 *</p> <p style="text-align: center;">--</p>	1,4	<p>D 21 D 3/00</p> <p>D 21 H 3/28</p> <p>C 08 L 3/00</p>
D	<p><u>US - A - 2 328 537</u> (G.E. FELTON et al.)</p> <p>* Entire document *</p> <p style="text-align: center;">--</p>	1,9	
D	<p><u>US - A - 2 113 034</u> (B.W. ROWLAND et al.)</p> <p>* Claims 1-5; page 2, right-hand column, lines 11-72 *</p> <p style="text-align: center;">--</p>	1	<p>TECHNICAL FIELDS SEARCHED (Int.Cl. 2)</p> <p>C 08 B 31/00</p> <p>C 08 L 3/00</p> <p>D 21 D 3/00</p> <p>D 21 H 3/02</p> <p>D 21 H 3/28</p>
	<p><u>US - A - 3 785 921</u> (F. IDE et al.)</p> <p>* Column 1, line 12 to column 3, line 45; column 4, lines 25-37; column 6, lines 7-21, 47-75; column 7, lines 1-27, table *</p> <p style="text-align: center;">--</p>	6,7	
	<p><u>US - A - 3 541 009</u> (P.S. ARENDT et al.)</p> <p>* Column 1, line 14 to column 3, line 52; example I; column 5, line 63 to column 6, line 3 *</p> <p style="text-align: center;">----</p>	6,7	<p>CATEGORY OF CITED DOCUMENTS</p> <p>X: particularly relevant</p> <p>A: technological background</p> <p>O: non-written disclosure</p> <p>P: intermediate document</p> <p>T: theory or principle underlying the invention</p> <p>E: conflicting application</p> <p>D: document cited in the application</p> <p>L: citation for other reasons</p>
<p><input checked="" type="checkbox"/> The present search report has been drawn up for all claims</p>			<p>&: member of the same patent family, corresponding document</p>
Place of search	Date of completion of the search	Examiner	
The Hague	03-06-1980	NESTBY	



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.

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:

- 1-5, 8-10 Processes for the manufacture of paper, and paper obtained
- 6,7 Paper additive composition per se.

- 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
- 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.