

Title (en)
Papermaking.

Title (de)
Papierherstellung.

Title (fr)
Fabrication de papier.

Publication
EP 0041056 A1 19811202 (EN)

Application
EP 81850084 A 19810518

Priority
• SE 8003948 A 19800528
• US 23864581 A 19810226

Abstract (en)
In making paper from an aqueous papermaking stock, a binder comprising colloidal silicic acid and cationic starch is added to the stock for improving the paper or the retention of the stock components, or is added to the white water for reducing the pollution problems or recovering values from the white water. The cationic starch of the binder has a degree of substitution of not less than 0.01, and the weight ratio of cationic starch to SiO₂ is between 1:1 and 25:1.

IPC 1-7
D21D 3/00; D21F 1/82

IPC 8 full level
D21F 1/82 (2006.01); **D21H 17/29** (2006.01); **D21H 17/68** (2006.01); **D21H 21/52** (2006.01); **D21H 23/76** (2006.01)

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D21F 1/82 (2013.01); **D21H 17/29** (2013.01); **D21H 17/68** (2013.01); **D21H 21/52** (2013.01); **D21H 23/765** (2013.01)

Citation (search report)
• EP 0006390 A1 19800109 - ARJOMARI PRIOUX [FR]
• US 3253978 A 19660531 - BODENDORF WARREN J, et al
• DE 1636335 A1 19710527 - ZSCHIMMER & SCHWARZ
• GB 1387744 A 19750319 - TATABANYAI SZENBANYAK
• Tappi, Journal of the Technical Association of the Pulp and Paper Industry, Vol. 63, No. 4, April 1980 Atlanta GA (US) J. MARTON: "The Role of Surface Chemistry in fines-Cationic Starch Interactions" pages 87-91 * the whole article *

Cited by
US4946557A; TR24973A; US4882087A; US5571494A; US5688482A; US5707493A; US5149370A; EP0348366A3; US5127994A; EP0257772A1; US4849055A; US4925530A; US4810301A; US5891305A; US5368833A; US5643414A; EP0603727A1; AU635365B2; US5447604A; DE3837746C1; EP0310959A1; US4964954A; US10214859B2; EP0490425A1; US5277764A; AU654306B2; EP0234513A1; EP0080986A3; WO8301970A1; AU717544B2; GB2292394A; GB2292394B; US5942086A; EP0490424A1; US5288317A; US6355141B1; US7431798B2; EP0786476A1; US6841039B1; WO0246529A1; WO9110776A1; WO9622244A1; LT3224B; DE102008000811A1; US8168040B2; US8454796B2; US10626558B2; EP0786475A2; US8440768B2; US9975781B2; WO9107351A1; US10801162B2; US11274399B2; US11732421B2; EP1620599B2

Designated contracting state (EPC)
AT BE CH DE FR GB IT LU NL SE

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