

Title (en)

METHOD FOR PRODUCING HIGH DRY-STRENGTH PAPER, PULPBOARD AND CARDBOARD

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PAPIER, PAPPE UND KARTON MIT HOHER TROCKENFESTIGKEIT

Title (fr)

PROCEDE POUR PRODUIRE DU PAPIER, DU CARTON-PATE ET DU CARTON A HAUTE RESISTANCE A LA TRACTION A L'ETAT SEC

Publication

EP 0972110 B2 20090311 (DE)

Application

EP 98921399 A 19980326

Priority

- DE 19713755 A 19970404
- EP 9801786 W 19980326

Abstract (en)

[origin: US6616807B1] Paper, board and cardboard having high dry strength are produced by the addition of cationic, anionic and/or amphoteric starch as dry strength agents to the paper stock and drainage of the paper stock with sheet formation in the presence of cationic polymers as retention aids for starch, and cationic polymeric retention aids are used for increasing the retention of dry strength agents comprising cationic, anionic and/or amphoteric starch in the production of paper, board and cardboard.

IPC 8 full level

D21H 21/10 (2006.01); **D21H 17/20** (2006.01); **D21H 17/45** (2006.01); **D21H 17/55** (2006.01); **D21H 17/56** (2006.01); **D21H 21/18** (2006.01); **D21H 17/29** (2006.01); **D21H 23/76** (2006.01)

CPC (source: EP KR US)

D21H 21/10 (2013.01 - EP KR US); **D21H 21/18** (2013.01 - EP US); **D21H 17/29** (2013.01 - EP US); **D21H 17/45** (2013.01 - EP US); **D21H 17/455** (2013.01 - EP US); **D21H 17/55** (2013.01 - EP US); **D21H 17/56** (2013.01 - EP US); **D21H 23/765** (2013.01 - EP US)

Citation (opposition)

Opponent :

GB 1110004 A 19680418 - BASF AG

Cited by

EP2148003A1

Designated contracting state (EPC)

AT BE CH DE ES FI FR GB IT LI NL PT SE

DOCDB simple family (publication)

US 6616807 B1 20030909; AT E268410 T1 20040615; AU 730063 B2 20010222; AU 7427598 A 19981030; CA 2284931 A1 19981015; CA 2284931 C 20100216; DE 19713755 A1 19981008; DE 59811513 D1 20040708; EP 0972110 A1 20000119; EP 0972110 B1 20040602; EP 0972110 B2 20090311; ES 2222591 T3 20050201; JP 2001518988 A 20011016; KR 20010006002 A 20010115; NZ 338029 A 20000428; PT 972110 E 20041029; WO 9845536 A1 19981015; ZA 982842 B 19990120

DOCDB simple family (application)

US 38197099 A 19991001; AT 98921399 T 19980326; AU 7427598 A 19980326; CA 2284931 A 19980326; DE 19713755 A 19970404; DE 59811513 T 19980326; EP 9801786 W 19980326; EP 98921399 A 19980326; ES 98921399 T 19980326; JP 54231698 A 19980326; KR 19997009080 A 19991004; NZ 33802998 A 19980326; PT 98921399 T 19980326; ZA 982842 A 19980403