

Title (en)
METHOD FOR DRYING OF PAPER AND DRY END OF A PAPER MACHINE

Title (de)
VERFAHREN ZUR TROCKNUNG VON PAPIER UND TROCKENPARTIE EINER PAPIERMASCHINE

Title (fr)
PROCEDE DE SECHAGE DU PAPIER SECTION SECHE D'UNE MACHINE A PAPIER

Publication
EP 0943034 B2 20081203 (EN)

Application
EP 97946772 A 19971202

Priority
• FI 9700745 W 19971202
• FI 964830 A 19961203

Abstract (en)
[origin: WO9827273A1] A method for drying of paper, in which method the paper web (W) to be dried is passed from the press section into a forward dryer section (D1), in which the web (W) is dried from the side of its bottom face in dryer groups (R1...RN) that apply a normal single-wire draw. The forward dryer section (D1) comprises exclusively single-wire groups (R1...RN) with normal single-wire draw. From the forward dryer section (D1) the paper web (W) is passed into a finishing section (D2). Here the paper web (W) is coated/surface-sized by means of a coating/surface-sizing equipment (20), dried in an after-dryer (30), in which the paper web (W) is dried in at least one dryer group (R21) that applies a normal single-wire draw. After this the paper web (W) is calendered and passed to a reeling station (50). In the method, the curling of the paper web (W) is controlled by means of elements (19; 31; 32; 33; 34; 35; 36; R32, R33; Dsyl, Dtela) and/or by means of assemblies and combinations formed out of said elements in the area of the forward dryer section (D1) and/or of the finishing section (D2). Further, a dry end of a paper machine is described, which comprises a forward dryer section (D1) and a finishing section (D2). The finishing section (D2) comprises a coating/surface-sizing equipment (20), and after-dryer (30), a calender (40), and a reeling station (50). The dry end comprises elements (19; 31; 32; 33; 34; 35; 36; R32, R33; Dsyl, Dtela) and/or assemblies and combinations formed out of said elements in view of controlling the curling of the paper web (W) in the area of the forward dryer section (D1) and/or of the finishing section (D2).

IPC 8 full level
D21F 5/04 (2006.01); **D21F 5/18** (2006.01); **D21F 9/00** (2006.01); **D21G 1/00** (2006.01); **D21G 7/00** (2006.01)

CPC (source: EP KR)
D21F 5/04 (2013.01 - EP KR); **D21F 9/00** (2013.01 - EP)

Citation (opposition)
Opponent :
• DE 4112537 A1 19921022 - ESCHER WYSS GMBH [DE]
• US 3948721 A 19760406 - WINHEIM KARL H
• EP 0617165 A1 19940928 - VALMET PAPER MACHINERY INC [FI]
• EP 0245250 A1 19871119 - SCOTT PAPER CO [US]
• Prospekt von Devron-Hercules in Bezug auf einen Kalandrier aus dem Jahre 1990
• Krenkel; Bernhard: Glättwerksuntersuchungen, Zusammenhänge zwischen Glättparametern und Messgrößen, Dissertation an der Fak. für Maschinenwesen und Elektrotech. der TU Graz, Heidenheim, 28.10.1975, Seiten 43-46
• Jackson and Gavelin: The role of nip temperature..., Svensk Papperstidn. 67, No. 20, Oct. 1964
• Inbetriebnahme-/Übergabeprotokoll(D14)

Designated contracting state (EPC)
AT DE ES FR GB IT PT SE

DOCDB simple family (publication)
WO 9827273 A1 19980625; AT E226660 T1 20021115; AU 5189798 A 19980715; BR 9713820 A 20000314; CA 2274228 A1 19980625; CA 2274228 C 20070327; CN 1096529 C 20021218; CN 1239527 A 19991222; DE 69716634 D1 20021128; DE 69716634 T2 20030626; DE 69716634 T3 20090716; EP 0943034 A1 19990922; EP 0943034 B1 20021023; EP 0943034 B2 20081203; FI 105935 B 20001031; FI 964830 A0 19961203; FI 964830 A 19980604; JP 2001505630 A 20010424; JP 3650131 B2 20050518; KR 100391045 B1 20030712; KR 20000053015 A 20000825

DOCDB simple family (application)
FI 9700745 W 19971202; AT 97946772 T 19971202; AU 5189798 A 19971202; BR 9713820 A 19971202; CA 2274228 A 19971202; CN 97180247 A 19971202; DE 69716634 T 19971202; EP 97946772 A 19971202; FI 964830 A 19961203; JP 52708098 A 19971202; KR 19997003902 A 19990501