Title (en)

Calender for treating a paper web on two faces

Title (de)

Kalander für die zweiseitige Behandlung einer Papierbahn

Title (fr)

Calandre pour le traitement d'une bande de papier sur deux faces

Publication

EP 0732447 B2 20041229 (DE)

Application

EP 96103279 A 19960304

Priority

DE 19508353 A 19950309

Abstract (en)

[origin: US5669295A] A calender for the two-sided treatment of a paper web has two similar stacks each of which has at least two soft rollers and two hard rollers. Working nips are formed between each hard and soft roller. The calender has at least one working nip wherein the dwell time (t) is at least 0.1 ms, the surface temperature (T) is at least 100 DEG C., and the load (P) on the stack creates an average compressive stress in the working nip of more than 42 N/mm2. This provides a calender that is smaller and less expensive to manufacture and operate than super-calenders of the prior art but that also affords excellent finishing results.

IPC 1-7

D21G 1/00; D21G 1/02

IPC 8 full level

D21G 1/00 (2006.01); **D21G 1/02** (2006.01)

CPC (source: EP KR US)

D21G 1/00 (2013.01 - EP KR US); **D21G 1/02** (2013.01 - KR); **D21G 1/0233** (2013.01 - EP US)

Citation (opposition)

Opponent :

- U. Rothfuss: "In-line- und Off-line-Satinage von holzhaltigen, tiefdruckfähigen Natupapieren", 11/12, 1993, Seiten 457-466
- J. Pav, P. Svenka: "Der Kompaktkalander - die Antwort auf die Herausforderung nach hohen Geschwindigkeiten bei der Glättung und Satinage", Das Papier 39 Jahrgang, Heft 10A, 1985, Seiten V178-V186
- E. Münch und C.W. Schmitz: "Der Moderne Superkalander, Basis für neue Konzeptionen der elastischen Glättung", dpw-Deutsche Papierwitschaft 1983/1, S. 57 bis 62

Cited by

EP1081281A3; EP1199404A3

Designated contracting state (EPC)

AT BE DE FI FR GB IT NL SE

DOCDB simple family (publication)

US 5669295 A 19970923; AT E173776 T1 19981215; CA 2169979 A1 19960910; CA 2169979 C 19990323; DE 19508353 A1 19960912; DE 59600850 D1 19990107; EA 000317 B1 19990429; EA 199600009 A2 19961001; EA 199600009 A3 19961230; EP 0732447 A1 19960918; EP 0732447 B1 19981125; EP 0732447 B2 20041229; JP 2612681 B2 19970521; JP H08246383 A 19960924; KR 0160398 B1 19990115; KR 960034576 A 19961024; NO 307617 B1 20000502; NO 960976 D0 19960308; NO 960976 L 19960910

DOCDB simple family (application)

US 61225896 A 19960307; AT 96103279 T 19960304; CA 2169979 A 19960221; DE 19508353 A 19950309; DE 59600850 T 19960304; EA 199600009 A 19960307; EP 96103279 A 19960304; JP 5148996 A 19960308; KR 19960005964 A 19960307; NO 960976 A 19960308