

Title (en)

Roll, calender and method for operating a roll

Title (de)

Walze, Kalander und Verfahren zum Betrieb einer Walze

Title (fr)

Rouleau, calandre et procédé pour le fonctionnement d' un rouleau

Publication

EP 0962591 A3 20001018 (DE)

Application

EP 99110246 A 19990527

Priority

DE 19824542 A 19980603

Abstract (en)

[origin: EP0962591A2] The roller, especially for a paper calendar assembly, has a heating system (19-22) which sets a different temperature at the roller journal (7,8) zones from the temperature at the center of the roller (9) between the journals (7,8) with the elastic roller cladding (4) round the roller core (2). The heating system (19-22) is a flow path for a heating medium. A displacement body (10) in the roller (1) forms a ring zone (11) to the core (2). The core (2) has a number of drillings, equally distributed in the peripheral direction, and axially parallel. The temperature control unit (22) sets the temperature of the heat carrier medium according to the tensile loading and the roller temperature. The temperature difference in the medium, between the entry and exit at the roller, is max. 3 degrees C. A larger heat exchange surface (14) is at the roller journal zones (7,8) than the heating surfaces at the roller center (9). The heating medium flow speed is faster at the roller center (9) than at the journals (7,8). The heating system (19-22) cools the journal zones (7,8) from the interior, where they are not covered by the elastic cladding (4). The heating medium temperature is between the temps. at the journal (7,8) and center (9) zones. Each roller in the calendar assembly has its own heating system (19 - 22). An Independent claim is included for the roller operation, where the temperature pattern is set axially according to the ambient temperature and the tensile loading. Preferred Features: The roller journals and the center zone are heated. The roller journals can be cooled more strongly than the other roller zones.

IPC 1-7

D21G 1/02

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CPC (source: EP US)

D21G 1/0233 (2013.01 - EP US); **D21G 1/0266** (2013.01 - EP US); **D21G 1/0286** (2013.01 - EP US)

Citation (search report)

- [A] EP 0796946 A1 19970924 - VALMET CORP [FI]
- [A] WO 9715721 A1 19970501 - VALMET CORP [FI]
- [A] DE 3014891 A1 19811022 - SCHWAEBISCHE HUETTENWERKE GMBH [DE]

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EP4249676A1; US7614122B2; EP1529878A1

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EP 0962591 A2 19991208; **EP 0962591 A3 20001018**; **EP 0962591 B1 20040901**; AT E275218 T1 20040915; CA 2273448 A1 19991203; CA 2273448 C 20040316; DE 19824542 A1 19991230; DE 19824542 B4 20050714; DE 59910375 D1 20041007; US 6209451 B1 20010403

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