

Title (en)

Method for satinizing a web material and roll for a satinizing calander

Title (de)

Verfahren zum Satinieren einer Materialbahn und Walze für einen Satinierkalander

Title (fr)

Méthode de satinage d'une bande de matériau et rouleau pour calandre de satinage

Publication

EP 1001081 B1 20040303 (DE)

Application

EP 99121660 A 19991102

Priority

DE 19851936 A 19981111

Abstract (en)

[origin: EP1001081A2] To satinize the surfaces of a web, and especially of paper, the web is passed through a nip formed by a roller with an elastic cladding of a plastics with a fiber reinforcement and a counter roller. The reinforcement fibers at the roller cladding are aligned according to the required surface finish, using glass or carbon fibers. The alignment and the thickness of the reinforcement fibers are set according to the required surface finish. The fiber dia. matches the dia. of the paper fibers in the web. An Independent claim is included for a roller, to satinize the paper web surface, with an even and inhomogenous hardness distribution over its surface (7). Preferred Features: The neighboring and adjacent roller surface zones (4) have a different hardness, where the dimensions of the separate hard surfaces (4) match the dia. of a paper fiber. The roller has a surface roughness $R_a \leq 0.1 \mu m$. The roller cladding (3) has reinforcement fibers (4) embedded in the plastics, where the fibers (4) are aligned radially by $\geq 90\%$ at the surface, with a different hardness from the plastics material. The fibers (4) are bristles or radially aligned roving sections (6).

IPC 1-7

D21G 1/00; **F26B 13/14**; **F16C 13/00**; **D21G 1/02**

IPC 8 full level

D21G 1/00 (2006.01); **D21G 1/02** (2006.01); **F16C 13/00** (2006.01); **F26B 13/14** (2006.01)

CPC (source: EP US)

D21G 1/00 (2013.01 - EP US); **D21G 1/0233** (2013.01 - EP US); **F26B 13/14** (2013.01 - EP US); **Y10T 428/1369** (2015.01 - EP US); **Y10T 428/1372** (2015.01 - EP US)

Cited by

US6682467B2; EP1188859A3; DE102011075179A1; US6880456B2; WO02093096A1

Designated contracting state (EPC)

DE FI FR GB

DOCDB simple family (publication)

EP 1001081 A2 20000517; **EP 1001081 A3 20010816**; **EP 1001081 B1 20040303**; DE 19851936 A1 20000531; DE 19851936 B4 20050512; DE 59908711 D1 20040408; US 6253671 B1 20010703

DOCDB simple family (application)

EP 99121660 A 19991102; DE 19851936 A 19981111; DE 59908711 T 19991102; US 43320799 A 19991104