

Title (en)

WEB SMOOTHNESS IMPROVEMENT PROCESS

Title (de)

VERFAHREN ZUR VERBESSERUNG DER OBERFLÄCHENGLATTHEIT

Title (fr)

PROCEDE D'AMELIORATION DU LISSE

Publication

**EP 1492921 A2 20050105 (EN)**

Application

**EP 03740931 A 20030411**

Priority

- IB 0303019 W 20030411
- US 37188802 P 20020411

Abstract (en)

[origin: WO03085192A2] The present invention provides a process for improving smoothness of a web surface by subjecting the web surface to an untreated smooth roll traveling at a different speed than the web and thereby producing heat generated by friction to plasticize the very top fibers in the mat. Surprisingly, the inventors found that no abrasive was needed to generate the amount of heat required to achieve the smoothness gain.

IPC 1-7

**D21D 1/00**

IPC 8 full level

**D21G 1/00** (2006.01); **D21D 1/00** (2006.01); **D21F 11/00** (2006.01); **D21H 25/04** (2006.01)

IPC 8 main group level

**D21D** (2006.01)

CPC (source: EP US)

**D21G 1/00** (2013.01 - EP US)

Citation (search report)

See references of WO 03085192A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 03085192 A2 20031016**; **WO 03085192 A3 20040304**; **WO 03085192 A9 20040408**; AU 2003259783 A1 20031020;  
AU 2003259783 A8 20031020; BR 0309233 A 20050215; CA 2481067 A1 20031016; CN 100422438 C 20081001; CN 1659336 A 20050824;  
EP 1492921 A2 20050105; JP 2006505698 A 20060216; PL 372570 A1 20050725; RU 2004133047 A 20050420; RU 2007110800 A 20080927;  
RU 2303672 C2 20070727; US 2004123966 A1 20040701

DOCDB simple family (application)

**IB 0303019 W 20030411**; AU 2003259783 A 20030411; BR 0309233 A 20030411; CA 2481067 A 20030411; CN 03813720 A 20030411;  
EP 03740931 A 20030411; JP 2003582357 A 20030411; PL 37257003 A 20030411; RU 2004133047 A 20030411; RU 2007110800 A 20070323;  
US 40938003 A 20030408