

Title (en)
Process and device for manufacturing an hydrophilic cotton article

Title (de)
Verfahren und Vorrichtung zur Herstellung eines Artikels aus Baumwolle

Title (fr)
Procédé et dispositif pour fabriquer un produit de coton hydrophile

Publication
EP 1167605 A1 20020102 (FR)

Application
EP 01121057 A 20000613

Priority
• EP 00951582 A 20000613
• FR 9907612 A 19990616

Abstract (en)
Hydrophilic cotton product with front soft surface and rough reverse surface, comprises first soft external layer of fine fibers, and second rough external layer of large fibers. The product, consisting totally of cotton fibres, comprises at least one first and one second external layer, the former made of fine fibers with low micron index, forming soft surface, and the latter of larger fibers with higher micron index, forming rough surface. The surface of the external layers may be divided into stripes, with the space between the stripes of first external layer smaller than that of the second external layer, preferably 0.4-1.2 mm and 1.2-3 mm, respectively, or the second layer may have a sequence of groups of stripes, with the space between the stripes in each group 0.4-1.2 mm and the space between each group and the next one equal 1.4-4 mm. At least one of the external layers may have surface imprint, and the first external layer (soft) may comprise softening agent distributed within this layer. Independent claims are also included for: (1) the process of making hydrophilic cotton product as claimed, during which each external layer is sprayed with jets of water with the determined distance between the axes of each consecutive jet, and this distance is adjusted in such manner as to produce different space between the stripes produced by jets on the first layer to that produced on the second layer; and (2) the use of the product as claimed for applying and/or removing make-up.

Abstract (fr)
L'invention concerne un procédé et un dispositif de fabrication d'un produit de coton hydrophile Le procédé comporte une étape de liage hydraulique des fibres au moyen de jets d'eau. Il est caractérisé par le fait que les jets d'eau forment des groupes dans lesquels les jets d'eau sont espacés les uns des autres d'une distance comprise entre 0,4 et 1,2 mm, les groupes de jets d'eau étant espacés les uns des autres d'une distance comprise entre 1,2 et 4 mm. Le produit obtenu est notamment destiné à un usage cosmétique pour maquiller et/ou démaquiller la peau. <IMAGE>

IPC 1-7
D04H 1/46

IPC 8 full level
A45D 40/00 (2006.01); **D04H 1/02** (2006.01); **D04H 1/425** (2012.01); **D04H 1/4266** (2012.01); **D04H 1/492** (2012.01); **D04H 1/495** (2012.01); **D04H 1/498** (2012.01); **D04H 13/00** (2006.01)

CPC (source: EP US)
A45D 40/00 (2013.01 - EP US); **D04H 1/02** (2013.01 - EP US); **D04H 1/425** (2013.01 - EP US); **D04H 1/4266** (2013.01 - EP US); **D04H 1/492** (2013.01 - EP US); **D04H 1/495** (2013.01 - EP US); **D04H 1/498** (2013.01 - EP US); **D04H 13/00** (2013.01 - EP US); **D04H 18/04** (2013.01 - EP US); **A45D 2200/1018** (2013.01 - EP US); **Y10T 428/24** (2015.01 - EP US); **Y10T 428/24355** (2015.01 - EP US); **Y10T 428/2457** (2015.01 - EP US); **Y10T 428/24595** (2015.01 - EP US); **Y10T 428/24603** (2015.01 - EP US); **Y10T 428/24612** (2015.01 - EP US); **Y10T 442/659** (2015.04 - EP US); **Y10T 442/663** (2015.04 - EP US); **Y10T 442/666** (2015.04 - EP US); **Y10T 442/696** (2015.04 - EP US)

Citation (search report)
• [XY] US 4069563 A 19780124 - CONTRACTOR RASHMIKANT MAGANLAL, et al
• [Y] FR 2655361 A1 19910607 - KAYSERSBERG SA [FR]
• [A] US 5806155 A 19980915 - MALANEY FRANK E [US], et al
• [A] EP 0750062 A1 19961227 - PROCTER & GAMBLE [US]
• [A] EP 0750063 A1 19961227 - PROCTER & GAMBLE [US]
• [A] EP 0405043 A1 19910102 - FLAWA SCHWEIZ VERBAND WATTEFAB [CH]
• [A] US 4442161 A 19840410 - KIRAYOGLU BIROL [US], et al

Cited by
EP1310226A3; FR2978460A1; EP1424418A1; FR2860524A1; AU2004278530B2; WO2010092261A2; WO2006084991A1; US7488697B2; WO2010088870A1; WO2013014259A1; WO2005033392A3; WO2004113602A1; WO03043551A1; EP3095422A1; US7669304B2; US7467445B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
US 6998360 B1 20060214; AT E248551 T1 20030915; AT E397112 T1 20080615; DE 60005004 D1 20031009; DE 60005004 T2 20040708; DE 60039045 D1 20080710; EP 1167605 A1 20020102; EP 1167605 B1 20080528; EP 1189531 A1 20020327; EP 1189531 B1 20030903; ES 2204671 T3 20040501; ES 2309025 T3 20081216; FR 2795100 A1 20001222; FR 2795100 B1 20010914; PL 196841 B1 20080229; PL 357249 A1 20040726; PT 1189531 E 20040227; WO 0076384 A1 20001221

DOCDB simple family (application)
US 1805002 A 20020118; AT 00951582 T 20000613; AT 01121057 T 20000613; DE 60005004 T 20000613; DE 60039045 T 20000613; EP 00951582 A 20000613; EP 01121057 A 20000613; ES 00951582 T 20000613; ES 01121057 T 20000613; FR 0001635 W 20000613; FR 9907612 A 19990616; PL 35724900 A 20000613; PT 00951582 T 20000613