

Title (en)  
Process and device for producing isotropic non-wovens

Title (de)  
Verfahren und Vorrichtung zur Herstellung isotroper Vliesstoffe

Title (fr)  
Procédé et dispositif pour produire des non-tissés isotropes

Publication  
**EP 1236818 B1 20050420 (DE)**

Application  
**EP 02003777 A 20020220**

Priority  
DE 10109476 A 20010228

Abstract (en)  
[origin: US2002116793A1] The invention relates to a process and an apparatus for manufacturing of a nonwoven. In order to be able to cost-effectively produce a nonwoven, which is to a great extent isotropic in machine and cross direction, a double-layer web is produced according to the invention by one single web forming device, where the one partial web consists of mainly lengthwise oriented fibers and the other partial web laid in zigzag-the cross-fiber partial web-consists of mainly crosswise oriented fibers. The primary fleece for the cross-fiber partial web is taken off the web forming process at a several times higher speed than the fleece of the other, slower partial web. Both partial webs are redirected and oriented to each other in such a way, that they can be brought together to form a double-layer complete web. This double-layer web produced in a cost-effective way is then bonded to form a nonwoven which is to a great extent isotropic.

IPC 1-7  
**D01G 25/00**; **D04H 1/70**

IPC 8 full level  
**D01G 25/00** (2006.01); **D04H 1/52** (2006.01); **D04H 1/70** (2006.01); **D04H 1/72** (2012.01); **D04H 1/74** (2006.01); **D04H 13/00** (2006.01)

CPC (source: EP US)  
**D01G 25/00** (2013.01 - EP US); **D04H 1/52** (2013.01 - EP US); **D04H 1/72** (2013.01 - EP US); **D04H 1/74** (2013.01 - EP US);  
**D04H 13/00** (2013.01 - EP US)

Cited by  
CN102002815A; EP1595981A1; FR2996565A1; CN104685119A; US9561601B2; WO2009024393A1; WO2009024396A1; WO2014053778A1;  
US10703668B2; US11939255B2; EP1936016B1

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

DOCDB simple family (publication)  
**US 2002116793 A1 20020829**; AT E293712 T1 20050515; DE 10109476 C1 20020627; DE 50202821 D1 20050525; EP 1236818 A1 20020904;  
EP 1236818 B1 20050420; ES 2236373 T3 20050716; PL 352500 A1 20020909

DOCDB simple family (application)  
**US 8387902 A 20020227**; AT 02003777 T 20020220; DE 10109476 A 20010228; DE 50202821 T 20020220; EP 02003777 A 20020220;  
ES 02003777 T 20020220; PL 35250002 A 20020226