

Title (en)

Stretchable high-loft-flat-tube structure from continuous filaments

Title (de)

Dehnbare, voluminöse, flachrohrförmige Struktur aus endlosen Filamenten

Title (fr)

Structure extensible et volumineuse de forme cylindrique aplatie réalisée à partir de filaments continus

Publication

EP 1586688 A1 20051019 (EN)

Application

EP 04008922 A 20040415

Priority

EP 04008922 A 20040415

Abstract (en)

Improved batts for sleeping bags, insulated apparel, bedding, and other uses are made from a tow of crimped continuous filaments by a machine and process which spreads, extends, and cross-laps the tow into an endless flat-tube structure with desired uniformity, balanced tensile strength, dimensional stability, stretchability, and high loft. <IMAGE>

IPC 1-7

D04H 3/07; D01G 25/00

IPC 8 full level

D01G 25/00 (2006.01); **D04H 1/74** (2006.01); **D04H 3/02** (2006.01); **D04H 3/04** (2012.01); **D04H 3/07** (2006.01); **D04H 13/00** (2006.01)

CPC (source: EP)

D04H 1/74 (2013.01); **D04H 3/02** (2013.01); **D04H 3/04** (2013.01); **D04H 13/00** (2013.01)

Citation (search report)

- [A] WO 9300464 A1 19930107 - ASSELIN ETS [FR]
- [A] US 3515621 A 19700602 - WATSON GEORGE A
- [A] EP 0343978 A2 19891129 - SABEE REINHARDT NILS
- [A] US 3492185 A 19700127 - BURGER WILLIAM H
- [AD] US 3747162 A 19730724 - WATSON G
- [A] WO 9837264 A1 19980827 - ASSELIN [FR], et al
- [A] WO 02070806 A1 20020912 - SAINT GOBAIN VETROTEX [FR], et al
- [A] US 6550107 B1 20030422 - JOURDE BERNARD [FR], et al

Cited by

CN102197170A; US8375996B2; WO2010052171A1

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 PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1586688 A1 20051019; EP 1586688 B1 20061108; AT E344846 T1 20061115; DE 602004003127 D1 20061221;
DE 602004003127 T2 20070830; ES 2277167 T3 20070701

DOCDB simple family (application)

EP 04008922 A 20040415; AT 04008922 T 20040415; DE 602004003127 T 20040415; ES 04008922 T 20040415