

Title (en)

YARNS OF COVERED HIGH MODULUS MATERIAL AND FABRICS FORMED THEREFROM

Title (de)

FÄDEN, DIE MIT MATERIAL MIT HOHEM E-MODUL ÜBERZOGEN SIND UND DAMIT HERGESTELLTES GEWEBE

Title (fr)

FILS DE MATERIAU A HAUT MODULE RECOUVERT ET TISSUS AINSI FABRIQUES

Publication

**EP 0906460 A4 20000119 (EN)**

Application

**EP 97943351 A 19970912**

Priority

- US 9716505 W 19970912
- US 71048896 A 19960918

Abstract (en)

[origin: WO9812371A1] The present invention is directed towards yarns of covered high modulus filament materials and fabrics which are formed therefrom. The present invention is intended to provide a composite filamentary material which exhibits the advantages of high modulus materials while providing a means for compensating the diminished properties exhibited by such fibers in the direction normal to molecular chain orientation. The composite filament structure of the present invention is a high modulus filament material covered with bicomponent filaments. The composite filament structure has a first interior layer of high modulus filament material and a second exterior layer of bicomponent fibers, the second exterior layer of bicomponent fibers being covered around the first interior layer of high modulus material along its entire length. The entire surface area of the high modulus material should be covered.

IPC 1-7

**D02G 3/00**

IPC 8 full level

**D04B 1/18** (2006.01); **D02G 3/04** (2006.01); **D02G 3/32** (2006.01); **D02G 3/36** (2006.01); **D02G 3/44** (2006.01); **D03D 1/00** (2006.01); **D03D 15/56** (2021.01); **D04B 21/18** (2006.01); **D21F 1/00** (2006.01); **D21F 1/10** (2006.01); **D21F 7/08** (2006.01)

CPC (source: EP KR US)

**D02G 3/00** (2013.01 - KR); **D02G 3/36** (2013.01 - EP); **D02G 3/447** (2013.01 - EP US); **D21F 1/0027** (2013.01 - EP US); **D10B 2401/041** (2013.01 - EP US); **Y10T 442/3154** (2015.04 - EP US); **Y10T 442/444** (2015.04 - EP US); **Y10T 442/629** (2015.04 - EP US); **Y10T 442/634** (2015.04 - EP US); **Y10T 442/637** (2015.04 - EP US); **Y10T 442/638** (2015.04 - EP US); **Y10T 442/641** (2015.04 - EP US); **Y10T 442/659** (2015.04 - EP US); **Y10T 442/668** (2015.04 - EP US)

Citation (search report)

- [YA] EP 0310201 A2 19890405 - STAMICARBON [NL]
- [YA] WO 9616216 A1 19960530 - FIBERWEB NORTH AMERICA INC [US], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 13, no. 589 (C - 670) 25 December 1989 (1989-12-25)

Designated contracting state (EPC)

AT BE DE ES FI FR GB IT NL SE

DOCDB simple family (publication)

**WO 9812371 A1 19980326**; AT E286997 T1 20050115; AU 4484297 A 19980414; AU 716177 B2 20000217; BR 9706771 A 19990824; CA 2237964 A1 19980326; CA 2237964 C 20011204; CN 1096510 C 20021218; CN 1207144 A 19990203; DE 69732234 D1 20050217; DE 69732234 T2 20050623; EP 0906460 A1 19990407; EP 0906460 A4 20000119; EP 0906460 B1 20050112; ES 2231892 T3 20050516; JP 2000501796 A 20000215; JP 3477210 B2 20031210; KR 100305120 B1 20011130; KR 19990067624 A 19990825; MX 9803908 A 19980930; NZ 330367 A 19990830

DOCDB simple family (application)

**US 9716505 W 19970912**; AT 97943351 T 19970912; AU 4484297 A 19970912; BR 9706771 A 19970912; CA 2237964 A 19970912; CN 97191589 A 19970912; DE 69732234 T 19970912; EP 97943351 A 19970912; ES 97943351 T 19970912; JP 51484498 A 19970912; KR 19980703651 A 19980515; MX 9803908 A 19980518; NZ 33036797 A 19970912