Title (en)

POLYESTER YARN AND METHOD FOR PRODUCTION THEREOF

Title (de)

POLYESTERGARN UND VERFAHREN ZUR SEINER HERSTELLUNG

Title (fr)

FIL DE POLYESTER ET SON PROCEDE DE PRODUCTION

Publication

EP 1154055 A1 20011114 (EN)

Application

EP 00976251 A 20001115

Priority

- JP 0008040 W 20001115
- JP 32794399 A 19991118

Abstract (en)

The present invention relates to polyester yarn which is characterized in that it is a multifilament yarn substantially comprising polytrimethylene terephthalate, and as well as the strength from the stress-strain curve being at least 3 cN/dtex and the Young's modulus being no more than 25 cN/dtex, the minimum value of the differential Young's modulus at 3-10% extension is no more than 10 cN/dtex and the elastic recovery following 10% elongation is at least 90%. Furthermore, said polyester yarn can be obtained by a method of producing polyester yarn which is characterized in that multifilament yarn obtained by the melt spinning of polymer substantially comprising polytrimethylene terephthalate of intrinsic viscosity Ä eta Ü at least 0.7 is hauled-off at a spinning rate of at least 2000 m/min and, without winding up, subjected to drawing and heat-treatment, after which it is continuously subjected to a relaxation heat treatment at a relaxation factor of 6 to 20% and wound up as a package. Moreover, the present invention also relates to a woven material of outstanding soft-stretchability which is characterized in that the aforesaid polyester yarn is used as the warp yarn and/or the weft yarn in the form of twisted yarn of twist coefficient 10,000 to 20,000. In this way, it is possible to produce yarn stably at a high yarn production rate without package tightening occurring, and, as well as there being little variation in properties in the fibre lengthwise direction, when made into fabric, said fabric stretches at low modulus so there is little sense of tightness, and it is possible to provide polyester yarn and woven materials with a soft handle. <IMAGE>

IPC 1-7

D02G 3/02; D01F 6/62; D02G 1/02; D03D 15/00

IPC 8 full level

D01F 6/62 (2006.01); **D02G 1/02** (2006.01); **D02J 1/08** (2006.01); **D03D 15/00** (2006.01)

CPC (source: EP KR US)

D01F 6/62 (2013.01 - EP KR); **D02G 1/02** (2013.01 - EP); **D02J 1/08** (2013.01 - EP); **D03D 15/283** (2021.01 - EP KR US); **D03D 15/41** (2021.01 - EP KR US); **D03D 15/567** (2021.01 - EP); D10B 2331/04 (2013.01 - EP); D10B 2401/046 (2013.01 - EP); D10B 2401/061 (2013.01 - EP)

Cited by

JP2015063788A; EP1818434A1; FR2897367A1; EP2599901A4; KR101439069B1; US10036104B2; US9431784B2

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)

EP 1154055 A1 20011114; **EP 1154055 A4 20041124**; **EP 1154055 B1 20080709**; AT E400681 T1 20080715; CA 2358715 A1 20010525; CA 2358715 C 20080729; CN 1147627 C 20040428; CN 1327492 A 20011219; DE 60039413 D1 20080821; KR 100695694 B1 20070315; KR 20010081027 A 20010825; TW 477837 B 20020301; WO 0136724 A1 20010525

DOCDB simple family (application)

EP 00976251 A 20001115; AT 00976251 T 20001115; CA 2358715 A 20001115; CN 00802255 A 20001115; DE 60039413 T 20001115; JP 0008040 W 20001115; KR 20017006313 A 20010518; TW 89124053 A 20001114