Title (en)

Method of manufacturing an elastic polyester fabric completely made of fibres

Title (de)

Verfahren zur Herstellung eines ganz aus Fasern bestehenden elastischen Polyestergewebes

Title (fr)

Procédé de fabrication d'un tissu polyester toutes fibres élastique

Publication

EP 0987358 A1 20000322 (FR)

Application

EP 99490026 A 19990824

Priority

FR 9811450 A 19980910

Abstract (en)

In the production of a polyester fabric, where all the fibers have an elastic stretch, a proportion of the fibers are a bi-component type which can be shaped into spiral coils. The fiber preparation and spinning stages are for non-stretch filaments, and the fabric is strongly structured to take in its potential elasticity. For the production of a polyester fabric, where all the fibers have an elastic stretch, a proportion of the fibers are a bi-component type which can be shaped into spiral coils. The fiber preparation and spinning stages are for non-stretch filaments, and the fabric is strongly structured to take in its potential elasticity. The loomstate fabric is given an initial heat treatment in hot air at a temperature of 180-190 degrees C under a low fabric tension before conventional processing and finishing such as washing and dyeing. During all subsequent heating processes, the fabric tension is limited. For the initial heat treatment, the fabric is carrier by a stenter through a temperature of 185 degrees C for 1.0-1.5 minutes. The fabric is composed of polyester and wool fibers, in a 50:50 mixture, where all the polyester fibers have a bi-component structure. The stenter gives a stenter advance of 15% and a fabric width control at the stenter exit of 9% less than the width of the loomstate material. After dyeing, the fabric is dried at a stenter at a temperature of 130 degrees C after a heating stage at 185 degrees C. The fibers are mixed at the carding and spinning stages, without recombing. The polyester and wool fibers are taken from their bales, to be mixed by carding and combing to form tops followed by drawing at a drafting frame and spinning. During weaving, the warps are reduced by 15-20%. The bi-component polyester fibers have an elastic stretch of 15-20% in the warps and wefts. The cloth is composed of yarns number 2/70, in the warps and wefts. The bi-component polyester fibers are in two different cuts of 80 and 105.

Abstract (fr)

Le procédé de l'invention concerne la fabrication d'un tissu polyester, toutes fibres, élastique comportant une certaine proportion de fibres polyester bi-composées à structure bilame, aptes à développer une frisure hélicoïdale et spiralée. Il comprend des opérations de préparation du mélange de fibres , de filature , de tissage et de divers traitements du tissu. Les opérations de préparation et de filature conduisant à un fil non-extensible et le tissu étant fortement décontexturé pour tenir compte de son élasticité potentielle, on soumet le tissu écru à un pré-traitement thermique, en air chaud à une température comprise entre 180 et 190 ° C sous très faible tension, préalablement à tous les traitements classiques en milieu liquide, notamment lavage et teinture ; de plus, lors de toutes les opérations subséquentes au pré-traitement thermique , on limite la tension du tissu. Le pré-traitement thermique à sec consiste par exemple en un passage en rame d'une durée de 1 à 1,5mm environ à une température de l'ordre de 185°C. S'agissant d'un mélange polyester/laine de l'ordre de 50/50 dont toutes les fibres de polyester sont à structure bilame, le passage en rame s'effectue avec une avance en rame de l'ordre de 15% et un réglage en laize en sortie de rame de l'ordre de 9% plus faible que la laize du tissu écru.

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CPC (source: EP US)

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Citation (search report)

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- [A] DATABASE WPI Section Ch Week 9419, Derwent World Patents Index; Class A23, AN 94-157075, XP002104465

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