

Title (en)

Method of false twisting a synthetic yarn to make a crimped yarn

Title (de)

Verfahren zum Falschdralltexturieren eines synthetischen Fadens zu einem Kräuselgarn

Title (fr)

Procédé pour la fausse torsion d'un fil synthétique pour produire un fil frisé

Publication

EP 1103641 A1 20010530 (DE)

Application

EP 00107125 A 20000407

Priority

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Abstract (en)

False twisting action on synthetic filaments, feeds filaments at given speed and low absolute tension of max. 5 cN to heated drawing pin at drawing zone. Filaments pass around drawing pin with angle (α) of ≤ 270 degrees , and are drawn out of drawing zone with higher filament tension than before drawing. The false twisting action on synthetic filaments, for use as a texturized yarn, feeds the filaments at a given speed and a low absolute tension of max. 5 cN to a heated drawing pin at a drawing zone. The filaments pass around the drawing pin with an angle (α) of at most 270 degrees, and are drawn out of the drawing zone with a significantly higher filament tension than before drawing. The filaments are passed into a false twisting zone at a higher speed than the original delivery speed, to be heated to a temp. of at least 180 degrees C and then cooled with a false twist, within the false twisting zone, with a false twister to give the filaments a false twist. The filaments are drawn from the false twisting zone at a speed of at least 400 m/min. to give the filaments an additional drawing action. The filaments are wound on to a bobbin. The filament tension in front of the feed to the take-off from the drawing zone is 0.5-1.2 cN/dtex. The drawing pin temp. is 80-160 degrees C and pref. ≥ 100 degrees C, and the filaments pass around the pin with an angle of at least 90 degrees . For the initial drawing action in the drawing zone, the speed ratio in the filament travel between its feed (w_1) and delivery ($w_{1.1}$) speeds is set at w_1 divided by $w_{1.1} \geq 1.4$ and pref. w_1 divided by $w_{1.1} = 1.5-1.7$. For the final drawing action in the false twisting zone the speed ratio between the take-off speed (w_2) and the feed speed (w_1) is set at w_2 divided by $w_1 = 1.03-1.06$. The filaments are given a false twist by a number of friction disks. The false twisted yarns are given a finishing heat treatment before bobbin winding. An Independent claim is included for a texturized yarn where the synthetic filaments are looped together irregularly to give alternating zones where they are bonded together and where they are loose. The loose zones have a larger yarn cross section than the bonded zones. Preferred Features: The alternating zones have an irregular sequence and size, with zone lengths from a few mm to several cm. The yarn is composed of at least two filaments. At least one filament has been false twisted before they are combined into the texturized yarn. Or the filaments are combined directly after they have been drawn from their supply point, and the bonded filaments pass together through the drawing and false twisting stages. The filaments are combined by an air eddy action within an eddy jet, directly after the false twisting stage. A further Independent claim is included for false twisting synthetic filaments (4), with a feed unit (17) which draws them off a supply bobbin (1). A heated drawing pin (18) is at the drawing zone, in the filament path after the feed unit (17), with a drawing zone feed (2). The assembly has a heater (5), a cooling unit (6), a false twister (7) with a second feed unit (3), and a bobbin winder (10). A filament guide (19) is in the movement path after the drawing pin (18), to set the angle of filament (4) travel around the drawing pin (18). Preferred Features: The filament guide (19) has an adjustable position within a guide path (20), which describes an arc around the drawing pin (18) at a constant gap from it.

Abstract (de)

Die Erfindung betrifft ein Verfahren zum Falschdralltexturieren eines synthetischen Fadens sowie das dadurch hergestellte Kräuselgarn. Hierbei wird der Faden in einer Streckzone an einem Streckstift ungleichmäßig verstreckt und anschließend in einer Falschdrallzone texturiert. Durch die ungleichmäßige Verstreckung wird in dem gekräuselten Garn abwechselnd ein offener Filamentbund und ein geschlossener Filamentbund erzeugt. Damit wird ein Kräuselgarn geschaffen, das einen Dünn-Dick-Effekt aufweist.

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CPC (source: EP KR US)

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Citation (search report)

- [A] US 3828537 A 19740813 - DOSCHKO W, et al
- [A] CH 525297 A 19720715 - BATSCH GUY [FR]
- [A] US 4000605 A 19770104 - CHIMURA KAZUYA, et al
- [A] FR 2271313 A1 19751212 - SOCITEX [FR]

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CN111003602A; DE10221169A1; EP1584716A1; WO2012107378A1; WO03002793A1

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