

Title (en)
Method and device for stufferbox crimping a yarn

Title (de)
Verfahren und Vorrichtung zum Strauchkräuseln eines Fadens

Title (fr)
Procédé et dispositif pour le frisage à boîte de bourrage d'un fil

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Application
EP 00100230 A 20000117

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Abstract (en)
For crimping a multifilament yarn, it is compressed into a plug, and its temp. is lowered in a cooling channel. The free end of the yarn is pulled free from the plug at the end of the cooling stage and the release point for the yarn at the plug is controlled by the yarn take-off speed. On a change of the yarn take-off speed, a signal is passed to the control with at least one parameter affecting the formation of the yarn plug. The yarn take-off speed change reverts to given time points through a comparison between the nominal (V_{soll}) and actual (V_{ist}) speeds. A signal is generated when $V_{soll} \leq V_{ist}$ and $V_{soll} \geq V_{ist}$, and no signal is produced when $V_{soll} = V_{ist}$. In the event where $V_{soll} \leq V_{ist}$, the signal triggers a parameter change to reduce the packing density of the yarn plug, and vice versa. The take-off speed is returned to a given nominal value at set time points and, at the same time, the release point of the yarn at the plug is registered so that the signal is triggered on a change in the yarn release position. If the yarn plug is shortened, the signal trips a parameter change to reduce the plug packing density, and vice versa. The parameter of the crimping appts. is formed by the heating temp. and/or the advance movement pressure, which are adjustable to form the yarn plug. The yarn take-off speed and/or the crimping appts. parameter are adjustable within given threshold limits, and the yarn plug formation is interrupted if the take-off speed and crimping appts. parameters are breached. The yarn take-off speed is modified by the action of a winder where it is wound on a bobbin. Or the take-off speed is set by a take-off unit which extracts the yarn from the plug at a constant tension for winding on a bobbin. An Independent claim is included for a yarn crimping appts. with a control (20) which determines at least the parameter for the crimping appts. (2) which affects the formation of the yarn plug (3). The crimping appts. control (20) has a signal link (19) to the take-off control (17). The appts. can have a texturizing jet with an expansion chamber to form the yarn plug (3). The temp. and/or the plug advance pressure of the advance movement system is the parameter which is varied by the control (20). The take-off control (17) has a timer to control the position of the yarn release point at the plug (3) by reversion time points in a time sequence. The control (20) is linked to a sensor (18). The yarn take-off is a winder (13) where the yarn is wound on a bobbin, and its control (17) is connected to the winder drive. The take-off also has a rotating godet roller (10), between the cooling stage (4) and the bobbin winder (13), and the yarn (1) is wound on a bobbin (14) at a constant tension.

Abstract (de)
Es wird ein Verfahren und eine Vorrichtung zum Stauchkräuseln eines multifilen Fadens beschrieben, bei welchem der gesponnene Faden in einer Kräuseleinrichtung zu einem Fadenstopfen gebildet wird. Nach Abkühlung des Fadenstopfens wird dieser zu einem Faden aufgelöst. Dabei wird die Lage des Auflösungspunktes durch Änderung der Abzugsgeschwindigkeit des Fadens geregelt. Gleichzeitig wird bei Änderung der Abzugsgeschwindigkeit ein Signal zur Steuerung zumindest eines die Bildung des Fadenstopfens beeinflussenden Parameters der Kräuseleinrichtung erzeugt, so daß ein gleichmäßig gekräuselter Faden herstellbar ist.

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