

Title (en)

Method and device to initiate the rewind operation after a yarn break during centrifugal spinning

Title (de)

Verfahren und Vorrichtung zum Einleiten des Umwickelvorganges beim Zentrifugenspinnen nach einem Fadenbruch

Title (fr)

Procédé et dispositif pour préparer l'opération de rebobinage après une cassure de fil pendant un procédé de filage centrifuge

Publication

EP 0931864 A3 19991208 (DE)

Application

EP 99100757 A 19990116

Priority

- DE 19802656 A 19980124
- DE 19849191 A 19981026

Abstract (en)

[origin: EP0931864A2] To start the rewinding process at a single-stage centrifugal spinner, after yarn breakage, a yarn detaching unit (14) is moved by a drive (23) at a cone winding (32) of the spinning cake (15). A yarn guide at the unit has a yarn guide contour (17) to lift the lower winding layers of the spinning cake (15) to the level of a rewinding sleeve (9), so that wrapping of the yarn detaching unit (14) is effectively prevented during rewinding. The yarn detaching unit (14) is moved into the spinning centrifuge (3) parallel to its inner wall (26), to bring a cutter (16) into contact with the wound cone (32) at the bottom of the spinning cake (15), and the yarn guide contour (17) is positioned at the lower wound layers. The axial force component (19) on the yarn detaching unit (14), on starting the rewinding process, is used by a force monitor (18) to generate a signal (s). During rewinding, the torque (22) at the rewinding sleeve (9) is used by a torque monitor (20) to generate a signal (i). An Independent claim is also included for the apparatus used for starting rewinding process, which includes a yarn detaching unit (14), with a cutter (16) to be presented to the cone winding (32) of the spinning cake (15) covered axially by a yarn guide contour (17). Preferred Features: A force monitor (18) is at the yarn detaching unit (14), with a signal line link (33) to the control (30). The torque monitor (20) at the rewinding sleeve holder (21) has a signal line (34) link to the control (30). The yarn (25) emerging from the yarn guide tube (7) is laid at the inner wall (26) of the spinning centrifuge (3), and the yarn detaching unit (14) can have an adjustable detach, which is moved from a rest position into a working setting, in a swing movement which is operated elastically, pneumatically or electrically, to be placed against the spinning cake (15) with an adjustable and defined force, to set the pressure of its pointed or rectangular cutter against the spinning cake (15). The detach is contained within a shrouding, with a slit opening for the detach to be extended and retracted. Limit stops define its range of movement. The yarn detaching unit (14) can have a controlled by a compressed air jet, which delivers an air jet stream to match a beating plate at the detach. The yarn detaching unit (14) can be fitted with an energizing system where a current flow to a magnet coil gives an elastic movement to the swing detach, which is composed at least partially of a ferromagnetic material.

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IPC 8 full level

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CPC (source: EP US)

D01H 1/08 (2013.01 - EP US); **D01H 15/004** (2013.01 - EP US)

Citation (search report)

- [AD] DE 19523937 A1 19970102 - SCHLAFHORST & CO W [DE]
- [AD] CH 254210 A 19480430 - PRINCE SMITH & STELLS LIMITED [GB]
- [A] CH 348346 A 19600815 - MINISTERUL IND USOARE [RO]

Cited by

CN103741238A; EP3623506A1; WO03078706A1

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