

Title (en)

Tension control and slack eliminating device for a yarn winder

Title (de)

Vorrichtung zur Fadenspannungsregelung und zur Beseitigung von Fadenlockerungen in einer Garnwickleinrichtung

Title (fr)

Dispositif de réglage de tension et d'élimination des relâchements de fil pour un dispositif de bobinage

Publication

EP 1457447 A2 20040915 (EN)

Application

EP 04003083 A 20040211

Priority

- JP 2003067526 A 20030313
- JP 2003070122 A 20030314
- JP 2003072675 A 20030317
- JP 2003072676 A 20030317

Abstract (en)

The present invention stabilizes a yarn tension in a yarn winder in which a plurality of winding units are disposed, each of the winding units being provided with a yarn slack eliminating device. A transmitted force adjusting mechanism is provided to adjust a rotative driving force transmitted by a slack eliminating roller 21 of a yarn slack eliminating device 10 to an unwinding tension applying member 22. The transmitted force adjusting mechanism can be set so that when a load acting on the unwinding tension applying member 22 increases above a predetermined value, the unwinding tension applying member 22 rotates or rotatively moves independently of the slack eliminating roller 21. When winding tension is weak, the unwinding tension applying member 22 rotates integrally with the slack eliminating roller 21 to tense a yarn. When the winding tension exceeds a predetermined value, the unwinding tension applying member 22 prevents the winding tension from becoming excessive to suppress a variation in tension. When the transmitted force adjusting mechanism is configured so as to vary the force transmitted to the unwinding tension applying member, it is easy to deal with spinning conditions (Fig.4). <IMAGE>

IPC 1-7

B65H 51/22; **B65H 59/18**; **D01H 4/48**

IPC 8 full level

B65H 51/22 (2006.01); **B65H 59/18** (2006.01); **B65H 69/00** (2006.01); **D01H 13/10** (2006.01)

CPC (source: EP)

B65H 51/22 (2013.01); **B65H 59/18** (2013.01); **B65H 69/00** (2013.01); **D01H 13/10** (2013.01); **D01H 13/104** (2013.01); **B65H 2701/31** (2013.01)

Cited by

EP2573235A3; US11377761B2; EP2808283A1; CN102139820A; EP2354069A3; CN110592744A; US2022403562A1; EP2962973A1; US9004259B1; EP3670410A4

Designated contracting state (EPC)

CH DE LI

DOCDB simple family (publication)

EP 1457447 A2 20040915; **EP 1457447 A3 20050427**; **EP 1457447 B1 20120606**; CN 100352751 C 20071205; CN 1530308 A 20040922; EP 2423142 A1 20120229; EP 2423142 B1 20130501

DOCDB simple family (application)

EP 04003083 A 20040211; CN 200410008049 A 20040310; EP 11182192 A 20040211