

Title (en)
Winding apparatus

Title (de)
Aufwickelvorrichtung

Title (fr)
Dispositif de bobinage

Publication
EP 0916610 B1 20030402 (DE)

Application
EP 98120683 A 19981105

Priority
• DE 19750510 A 19971114
• DE 19824593 A 19980602

Abstract (en)

[origin: EP0916610A2] The bobbin winder assembly has the yarn guide (18,21), the bobbin clamping plate (2) with the catch slit (4) and the suction unit (37) in an array so that the yarn (1) is on an angled path over the edge (6) of the clamping plate towards the bobbin sleeve (13) on the direction of clamping plate rotation. The plate edge has a yarn catch projection (5), and a cutback recess (7) of the catch slit which, with the edge of the clamping plate, form a yarn guide edge (9). The guide edge extends against the direction of rotation to an entry plane, so that the yarn is moved along the inner surface (15) of the plate into the clamping slit (14) through the clamping plate rotation. The yarn guide (18,21) moves parallel to the rotary axis of the bobbin sleeve, with the guide (18,21), sleeve clamping plate and suction unit in sequence along the line of yarn travel. The guide edge (9) has a spiral shape towards the sleeve edge (17). The clamping slit (14) is formed by a recess (12) in the centering shoulder (8) of the clamping plate and the sleeve edge. The recess has a radial angled clamping flank (16), tapering down below the sleeve edge, so that the clamping slit has an increasing width in the direction of the sleeve (13) rotation. On an axial section, the recess has a turned-in L-shape, extending over an arc of the smaller dimensions. The recess extends over the centering shoulder (8) by an angle of 60-120 degrees, so that the cutout (7) in the end edge (6) and the recess (12) in the centering shoulder overlap. The catch slit (4), at the clamping plate (2), is offset axially away from the sleeve center in front of the clamping slit, in the direction of rotation, into the entry plane. The cutter (45) is between the suction unit (37) and the sleeve clamping plate, so that the caught yarn (1) is drawn into the cutter by the catch projection (5), through the rotation of the clamping plate (2). The cutter has an entry edge with a blade at its end shortly after a step. A sensor (32) monitors the position of the catch slit (4) at the clamping plate connected to the control (27) for the movements of the yarn guide. The sensor (32) is a pulse generator, to deliver a pulse to the control on each rotation of the clamping plate. The control evaluates the number of pulses in a time unit, to calculate the sleeve rotation speed. The yarn guide is a reciprocating guide (21) at a reciprocating movement system, to move the yarn to and fro along the length of the sleeve to carry the wound yarn as a bobbin, and outside the length of the windings. The yarn guide speed is set through a variable drive, independent of the movement direction.

IPC 1-7
B65H 65/00

IPC 8 full level
B65H 51/16 (2006.01); **B65H 54/06** (2006.01); **B65H 54/22** (2006.01); **B65H 54/34** (2006.01); **B65H 54/71** (2006.01); **B65H 65/00** (2006.01); **B65H 67/04** (2006.01)

CPC (source: EP US)
B65H 54/34 (2013.01 - EP US); **B65H 54/71** (2013.01 - EP US); **B65H 65/00** (2013.01 - EP US); **B65H 67/04** (2013.01 - EP US); **B65H 2701/31** (2013.01 - EP US)

Cited by
CN111003587A; US6457668B1; EP1129975A3; WO2007033784A1

Designated contracting state (EPC)
CH DE FR GB IT LI

DOCDB simple family (publication)
EP 0916610 A2 19990519; EP 0916610 A3 20000202; EP 0916610 B1 20030402; CN 1094460 C 20021120; CN 1217285 A 19990526; DE 59807719 D1 20030508; JP H11217158 A 19990810; TR 199802299 A2 19990621; TR 199802299 A3 19990621; TW 387856 B 20000421; US 6145775 A 20001114

DOCDB simple family (application)
EP 98120683 A 19981105; CN 98122467 A 19981116; DE 59807719 T 19981105; JP 32223998 A 19981112; TR 9802299 A 19981112; TW 87118676 A 19981110; US 19173198 A 19981113