Title (en)

Cross-winding machine and method for operating a cross-winding machine

Title (de)

Kreuzspulautomat sowie Verfahren zum Betreiben eines Kreuzspulautomaten

Title (fr)

Bobinoir automatique à fil croisé et procédé de fonctionnement d'un bobinoir automatique à fil croisé

Publication

EP 1006069 B1 20040102 (DE)

Application

EP 99119994 A 19991013

Priority

DE 19855126 A 19981130

Abstract (en)

[origin: EP1006069A2] The automatic bobbin winder assembly has a sensor system which continuously monitors the feed of spinning cops. On a failure of the spinning cops feed, following a widest clearing of the cop transport system, the preceding ring spinner is controlled to work at a slower speed through a reduction in the power supplies and the winding stations are set into an arrested switch mode. Initially, a given number of transport plates are prepared with empty sleeves at the bobbin winder conveyor system and, on resumption of the spinning cops feed, the bobbin winder is accelerated to normal working speeds and the winding stations remain in an arrested switch state until the sleeve return stretch is cleared. A sensor system (45) monitors the cop feed to the automatic bobbin winders. A monitor (24) at the transport system (21) registers the sleeves, with its control (46) linked functionally with the sensor (45) system and the central control unit (27) for the automatic winders. The control (46) for the sleeve monitor (24) is set so that, on receipt of a signal to show no cop feed, bobbin transport plates (41) which are charged with empty sleeves (40) coming into the transport system (21) from the sleeve return stretch (8) are diverted to the cop feed stretch (2). When a given number are in place, a signal is sent to the central control unit (27) to trigger command signals to the bobbin winders to shift into a defined energy-saving working mode. The bobbin winders are held in the mode until the central control (27) receives a signal from the sensor system (45) and the control at the ring spinner that the cop feed has been resumed. A unit (16a) at the sleeve monitor (24) registers the counted transport plates (41) with empty sleeves, to generate a signal to the central control (27) when a given number of empty sleeves have been assembled. The number of diverted transport plates (41) represents the number of winding stations (A,B.....) of the automatic bobbin winder. The sleeve monitor (24) control (46) sends the signal to show a break in the cop feed after a given time span, to the central control (27), if the given number of transport plates (41) to be diverted has not been achieved. At the central control (27), after receipt of the sleeve monitor signal, it stops the drive for the reserve stretch (5), operates the suction action of a mobile cleaner is fitted, builds up transport plates at the sleeve monitor (24), disconnects the sleeve cleaning stretch (10) and the manual preparation stretch. The cop preparation stations (42) are stopped, and the winding stations are switched to an arrest mode (A,B...). The drives for the lateral transport units (6) are stopped, and a control lamp is lit to show that the assembly has been switched into an energy saving mode. After a given time span from the first command signal, the central control unit (27) transmits a further command signal to stop the drive of the cop feed stretch (2), the drive of the connecting stretch (7), the drive of the sleeve feed stretch (8) and the drive of the distribution stretch together with the passage (1) drive. A sensor system at the ring spinner is connected to the central control unit (27) of the automatic bobbin winder, to indicate that the spinner is ready to be cleared, for the winder to be accelerated into the operating speed mode. A sensor (51) is installed at the entry to the distribution stretch (9) to monitor the occupancy of the sleeve return stretch (8).

IPC 1-7

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CPC (source: EP US)

B65H 67/06 (2013.01 - EP US); B65H 2701/31 (2013.01 - EP US)

Cited by

DE102016115249A1; EP3312122A1; CN107963515A; EP4253618A1; WO2019174183A1; EP3312122B1

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DOCDB simple family (application)

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