Title (en)

Method and winding apparatus for winding a continuously supplied thread

Title (de)

Verfahren und Aufwickelvorrichtung zum Aufwickeln eines kontinuierlich zulaufenden Fadens

Title (fr)

Procédé et dispositif de bobinage pour bobiner un fil textile alimenté en continu

Publication

EP 0921087 A2 19990609 (DE)

Application

EP 98120682 A 19981105

Priority

DE 19750510 A 19971114

Abstract (en)

The movement of the yarn guide to catch the yarn at the bobbin sleeve, and wind the bobbin on to it, is controlled according to the rotary speed of the bobbin sleeve. When the rotation of the sleeve reaches the winding speed level, the yarn is caught and wound. The position of the yarn catch groove is registered by a sensor at the catch unit, which generates a signal to release the yarn guide movement. The yarn guide moves parallel to the bobbin sleeve line, with an independent direction in the movement through a controlled drive with a variable speed. After winding, the yarn is transferred from the yarn guide to a reciprocating yarn guide for bobbin winding. The independent movement direction of the yarn guide in the bobbin winding zone and outside it, is through a controlled variable speed drive. When the bobbin is fully wound, the yarn guide is moved into the bobbin winding zone to give a yarn locking winding action. The sleeve, with the full bobbin, is taken from the winding station, and the yarn is led to a cutter and transfer unit with a suction system. The guide with the yarn is moved into a change position as soon as the bobbin speed drops below the winding speed and the yarn is pressed against an empty bobbin sleeve by the yarn guide and suction unit. The yarn is moved on the normal plane while the locking windings are formed and during the transfer to the suction unit. An Independent claim is included for a bobbin winder, with a control (8) to set the drives (19) of the yarn guides (18,6). The control (8) is linked to the sensor (20) which monitors the rotary speed of the bobbin sleeve (13). Preferred Features: A sensor (25) is near the yarn catch unit (14), to register the position of the catch groove (21), and is linked to the control (8). The bobbin sleeve (13) is clamped between two centering plates at the bobbin holder, with the catch (14) formed at one of the centering plates. The rotary speed of the sleeve (13) and the position of the catch groove (21) can be registered by a common sensor, linked to the control (8). The sensor is a pulse generator, which signals the presence of the catch groove (21) by a pulse on each rotation of the centering plate. The control (8) calculates the rotary speed from the number of pulses received within a time unit. The yarn guide is a reciprocating guide (6) at a reciprocating drive system (22), to carry the yarn (1) within the bobbin winding zone along the sleeve (13), and outside the zone. The guide (6) is operated by a variable speed motor, independently of the direction. The transfer unit has a swing grip arm, which moves between a rest position and a transfer setting. On its swing movement, it passes through the yarn (1) path, to carry the yarn (1) into the transfer setting at the suction unit. The suction unit has a cutter and a suction connection.

Abstract (de)

Die Erfindung betrifft ein Verfahren und eine Aufwickelvorrichtung zum Aufwickeln eines kontinuierlich zulaufenden Fadens (1) mit einer konstanten Aufspulgeschwindigkeit zu einer auf einer angetriebenen Hülse (13) gewickelten Spule. Hierbei wird der Faden vor dem Aufwickeln in einer mit der Drehzahl der Hülse rotierenden Fangeinrichtung (14) außerhalb des Spulbereichs gefangen und auf der Hülse angewickelt. Die Führung des Fadens erfolgt dabei durch einen beweglichen Fadenführer (18). Der Fadenführer ist mit einem Antrieb (19) gekoppelt. Erfindungsgemäß wird die Bewegung des Fadenführers in Abhängigkeit von der Drehzahl der Hülse derart gesteuert, daß der Faden bei Erreichen der Spuldrehzahl gefangen und angewickelt wird. Hierzu wird die Drehzahl der Hülse mittels eines Sensors (25) erfaßt und einer den Antrieb (19) des Fadenführers steuernden Steuereinrichtung (8) aufgegeben. <IMAGE>

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