

Title (en)

Device and method for regulating the tension of a filamentary material, especially of a winding wire for electric coils

Title (de)

Vorrichtung und Verfahren zur Spannungsregulierung eines fadenförmigen Gutes, vorzugsweise eines Wickeldrahtes für elektrische Spulen

Title (fr)

Dispositif et procédé de régulation de la tension d'un matériau filiforme, en particulier d'un fil de bobinage pour bobines électriques

Publication

**EP 0564018 B1 19960605 (DE)**

Application

**EP 93200601 A 19930303**

Priority

- CH 100392 A 19920330
- CH 376592 A 19921209

Abstract (en)

[origin: EP0564018A2] In order to regulate the wire tension on a winding device for electrical coils, a wire tension regulator (10-1) is arranged, in the case of which a withdraw roller (16) and a contact-pressure roller (17), which can be pressed against said withdraw roller (16), are provided for initial braking of the winding wire (25). The winding wire (25) is subsequently looped through 360 DEG over a braking wheel (22), it being possible to drive the braking wheel (22) in the forward and reverse directions of the wire by means of a DC motor (20), and a strain gauge (30) being arranged between the braking wheel (22) and the winding device. The DC motor (20) emits a rotor-position signal (S1) to a motor controller (28) which on the one hand passes said signal on as an amplified signal (S2) to a control unit (40) and, on the other hand, passes a derived actual-value torque signal (S3) to the control unit (40) as well. In addition, a desired-value wire tension signal (S6) is passed from the machine controller (50) to the control unit (40), and a desired-value wire tension signal (S6') is supplied from the wire tension preselector (52) to the control unit (40), and the desired value (S6 or S6') of the wire tension is compared with a signal (S5) representing the instantaneous wire tension (30, S4, 38, S5, 40), the control unit (40) emitting a control variable signal (S7) to the motor controller (28) and, amplified via said controller, as a power supply (E) to the DC motor (20), in order to change the tension of the wire (25) from its present value to the desired value. <IMAGE>

IPC 1-7

**H01F 41/06**

IPC 8 full level

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CPC (source: EP US)

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Cited by

CN110310821A; DE102004020465B3; EP3290370A1; DE102005028053B3; DE10317536B4; US5906330A; US5988553A; US8102131B2; US11780702B2; WO9812719A1; WO2015150178A1

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