

Title (en)
Yarn-sensing device.

Title (de)
Fadenfühler.

Title (fr)
Tateur de fil.

Publication
EP 0158199 A1 19851016 (DE)

Application
EP 85103451 A 19850323

Priority
• DE 3413275 A 19840407
• DE 3422308 A 19840615

Abstract (en)
[origin: US4629137A] A pneumatic sensor is provided for detecting and indicating the tension in running strand material, such as yarn, wire and the like. A source of compressed air is connected to an air escape nozzle having an outlet opening in one end thereof and a closing member is supported adjacent the outlet opening and is normally spaced a predetermined distance from the outlet opening to regulate and partially restrict the escape of air therefrom. The strand engages the closing member and varies the space or gap between the closing member and the nozzle outlet in accordance with the amount of tension in the strand. A pressure gauge is provided for indicating the amount of air pressure in the pneumatic pressure system and for thereby indicating the amount of tension in the running strand. A pressure/electric transducer is operable by the pneumatic pressure system and may operate a control system for a variable speed motor in a yarn take-up system to vary the takeup rate to maintain a predetermined tension on the yarn being taken up. The variation in air pressure in the pneumatic pressure system may also be utilized to operate a pneumatic cylinder for varying the braking force applied to a wire let-off beam in an unwinding operation so that the tension in the wire is maintained within a predetermined tension range.

Abstract (de)
Ein Fadenfühler zur Messung der Fadenzugkraft sitzt auf einem federelastischen oder federnd belasteten Träger (5) Der Träger (5) ist mit seinem mit der Fadenzugkraft belasteten Ende vor einer pneumatischen Düse (8) gelagert. Die Düse (8) ist an ein Pneumatiksystem mit konstant eingestelltem Druck über eine Drossel (12) angeschlossen. Der Druck hinter der Drossel (12) repräsentiert das Meßsignal für die Fadenzugkraft. Der Träger (5) kann ein einseitig eingespannter, vorzugsweise als Parallelfeder ausgebildeter Federstab sein. Das pneumatische System, an dem die Düse (8) angeschlossen ist, kann mit einem Speicher verbunden sein, um kurzfristige Schwankungen der Fadenzugkraft auszugleichen.

IPC 1-7
B65H 59/38; **B65H 59/10**

IPC 8 full level
B65H 59/38 (2006.01); **B65H 59/40** (2006.01); **B65H 63/032** (2006.01)

CPC (source: EP US)
B65H 59/381 (2013.01 - EP US); **B65H 59/40** (2013.01 - EP US); **B65H 63/0328** (2013.01 - EP US); **B65H 2701/31** (2013.01 - EP US)

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

DOCDB simple family (publication)
EP 0158199 A1 19851016; US 4629137 A 19861216

DOCDB simple family (application)
EP 85103451 A 19850323; US 71920985 A 19850402