

Title (en)  
Online measurement techniques

Title (de)  
Online Messtechnik

Title (fr)  
Techniques de mesure en ligne

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Application  
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Priority  
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Abstract (en)

The on-line monitoring system to measure the working of a card (1) for its control and adjustment, takes a measured value or one of the measured values of the carding forces at one or more stationary carding components or at separate or several revolving flats (8). The system controls and adjusts at least one of the carding machine elements: the gaps between the revolving flats and the drum; the gaps between the stationary carding components and the drum; the distance between the clamping point and the fiber transfer point on the licker-in; the clamping force at the feed clamping point; the rotary speed of the licker-in; the rotary speed of the card feed roller; the drum rotary speed; the variable cross section surface of the filling shaft for the card; the air blowing action at the filling shaft; the transfer factor between two successive rollers i.e. the proportion of the fiber mass at the first roller which is transferred to the second roller on each roller rotation and especially the proportion of the fiber mass at the drum cladding transferred to the doffer on each drum rotation; the grinding cycles and especially the grinding intensity and the grinding times for the clothing at the carding drum and/or the flats. The measured values or value can refer to the fibers on one roller of the card assembly around the drum, the licker-in or the doffer to give a setting value for at least the clamping force at the clamping point in the feed and/or the rotary speed of the licker-in and/or the card feed roller and/or the rotary speed of the drum. The measured values or value can relate to the fiber mass at the card feed. The measured values or value can relate to the number of burls and/or trash particles to give adjustment values for at least the blade setting at the licker-in and/or the guide in front of the blade and/or the gap between the doffer and the drum and/or the licker-in rotary speed and/or the flat speed and/or the clothing grinding. The measured values or value can relate to the amount of waste at least at one point on the card, to set the rotary speed of the licker-in and/or the rotary speed of the drum and/or the flat speed. The measured values or value can relate to the sliver adhesion length and/or the fiber transfer factor between rollers and especially between the drum and the doffer roller. The measured values or value can relate to the power or torque at the drive for the carding components and especially for the drum, the revolving flats, the licker-in or the doffer. The measured values or value can relate to the air pressure conditions in the filling shaft, to set the variable cross section and/or the rotary speed of the material loosening roller in the shaft and/or the air blower. The measured values or value can relate to the flow in the waste channel to set the blade and/or the guide at the licker-in and/or the setting of the suction system at the card. The measured values or value can relate to the particle dimension measurements at least at one dirt separation point. The measured values or value can relate to the temperature and/or the relative air humidity and/or the moisture content of the fibers being worked at the card. The measured values or value can relate to the card production performance.

Abstract (de)

Die Erfindung bezieht sich auf eine Vorrichtung für Karden, mit einer Steuer- und Regeleinrichtung und mindestens einer Messvorrichtung. Jede vorhandene Messvorrichtung misst jeweils eine Grösse, die in Zusammenhang mit den Arbeitsverhältnissen der Karde steht, während des Betriebes der Karde. Jede vorhandene und angeschlossene Messvorrichtung leitet die gemessene Grösse an die Steuer- und Regeleinrichtung weiter. Die Steuer- und Regeleinrichtung ermittelt aufgrund der gemessenen Grösse oder Grössen einen oder mehrere optimierte Einstellwerte für mindestens ein Maschinenelement der Karde oder des zugehörigen Füllschachtes und steuert oder beeinflusst die entsprechenden Stellglieder für die Einstellung des jeweiligen Maschinenelementes entsprechend. <IMAGE>

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