Title (en)

Method and device for controlling the breaking length ratio in a paper machine

Title (de)

Verfahren und Vorrichtung zur Regelung des Reisslängenverhältnisses in einer Papiermaschine

Title (fr)

Procédé et dispositif de régulation de proportion de longeur de rupture dans une machine à papier

Publication

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Application

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Priority

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Abstract (en)

To set the breaking length ratio of a paper web, at a papermaking machine, the actual breaking length ratio is measured at the web formed from a wet pulp delivered by the stock inlet (1), which is compared with a nominal breaking length ratio. The deviation between actual and nominal values is used to adjust the micro-turbulence at the stock inlet delivery opening. The stock inlet has at least one dividing blade, which has a sliding movement to set the level of micro-turbulence. The breaking length ratio is measured by an ultrasonic system. The measurements are made as a lateral profile, and the micro-turbulence is adjusted by sections across the machine width. The measurements are made at a number of points (5.1-5.3) across the machine width, where at least one of the measurement points can be moved by sliding across the machine line. The value of the micro-turbulence alteration is proportional to the absolute difference between the actual and nominal breaking length ratios, where the micro-turbulence is reduced on a low breaking length ratio, and vice versa. The sliding blade is moved along the machine running when the breaking length ratio is too large, and against the machine direction if it is too small. At the same time that the micro-turbulence is adjusted, a modification is made to the difference between the speed of pulp flow from the stock inlet and the fourdrinier movement speed. An Independent claim is included for a papermaking machine with a stock inlet (1) and at least one system to modify the micro-turbulence in the emerging pulp flow. Measurement points (5.1-5.3) to register the breaking length ratio are across the machine width, linked to a unit (9) which compares actual and nominal breaking length ratio values and shows a deviation between them. A control unit (13) sets the intensity of the micro-turbulence at the outflow from the stock inlet, according to the required correction to bring the nominal and actual values together. Preferred Features: The evaluation unit (9) has a suitable program for the comparison of nominal and actual breaking length ratio values, and register a deviation between them. At least one setting system at the stock inlet is in sections, for an adjustment to the intensity of the micro-turbulence by sections across the machine width.

Abstract (de)

Die Erfindung betrifft ein Verfahren zur Einstellung und Regelung des Reißlängenverhältnisses einer erzeugten Papierbahn, mit den Verfahrensschritten: Herstellung einer fluiden Faserstofflage mit Hilfe eines Stoffauflaufes (1) mit einer Stoffauflaufdüse, Erzeugung einer Papierbahn aus der fluiden Faserstofflage, Messung des Reißlängenverhältnisses L/Qakt der Papierbahn an der laufenden Bahn, Vergleich des aktuellen Reißlängenverhältnisses L/Qakt mit einem vorgegebenen Reißlängenverhältnis L/Qvor und Bestimmung der Abweichung, Erhöhung der Mikroturbulenz im Bereich der Stoffauflaufdüse, falls das aktuelle Reißlängenverhältnis L/Qakt größer ist, als das vorgegebene Reißlängenverhältnis L/Qvor, Reduktion der Mikroturbulenz im Bereich der Stoffauflaufdüse, falls das aktuelle Reißlängenverhältnis L/Qakt kleiner ist, als das vorgegebene Reißlängenverhältnis L/Qvor. Außerdem betrifft die Erfindung eine Papiermaschine zur Durchführung des oben genannten Verfahrens. <IMAGE>

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