

Title (en)
Method for regulating fiber orientation

Title (de)
Verfahren zur Faserorientierungs-Regelung

Title (fr)
Procédé de régulation de l'orientation des fibres

Publication
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Application
EP 00118922 A 20000901

Priority
DE 19953225 A 19991105

Abstract (en)
[origin: DE19953225A1] To control the fiber orientation in a paper or cardboard web, a diaphragm (2) sets the lateral speed profile of the pulp flow (5) from the delivery jet of the stock inlet. Deviations in the lateral fiber orientation profile are corrected according to measurements of at least one component in the lateral speed profile. At least one measured component of the lateral speed profile, which is relevant for a corrective action, is the pulp flow speed along or across the machine line, or the deviations in the angle of the pulp (5) flow. The measurements are taken at the surface of the pulp flow (5), by a monitor (4) which moves across the pulp flow (5) and preferably accurately in the line across the machine. The monitor (4) is only moved across a zone with an actual deviation in the lateral profile. A correlation is drawn between the measured component of the lateral speed profile and a direct measurement of the lateral fiber orientation profile in the paper/cardboard web through the arrangement of paired profiles. Each paired profile is composed of at least one typical value for the lateral speed profile and at least one typical value for the lateral fiber orientation profile at a given measurement point at the web, or with a reference value. The fiber orientation profile is measured on-line or off-line. With the setting of the non-parallel speed vectors (10a-10k), fiber orientation faults are corrected which are developed at the web former, press section or the drying station. The gap opening at the diaphragm (2) is varied in sections, by a separate control unit, to modify the lateral speed profile, or the lateral speed profile is varied by adjustments to the pulp throughput in sections by a throttle action or an additional/extracted fluid feed on the sectional volume flows, or a combined adjustment control action. The lateral web weight profile and the material density are set by coupling the control actions for fiber orientation and web weight in sections.

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