

Title (en)
Method and device for fractionating a paper fibre suspension

Title (de)
Verfahren und Vorrichtung zum Fraktionieren einer papierfaserhaltigen Suspension

Title (fr)
Procédé et dispositif de fractionnement d'une suspension de fibres à papier

Publication
EP 1096063 A1 20010502 (DE)

Application
EP 00121414 A 20000929

Priority
DE 19951711 A 19991027

Abstract (en)
To divide a suspension (S) of paper fibers into fractions, especially a suspension of used paper fibers, a sieve (1) separates it into two fractions, such as according to fiber length. A parallel flow (4) is generated by a sweeper (5) with a rough surface, so that the suspension (S) is dragged through by the sweeper (5) with virtually no slip. In a contact zone of up to 1 mm from the sweeper (5), the suspension is moved at a speed of at least 90% of the sweeper (5) speed. The sweeper (5) is moved along the line of the sieve (1), with a gap (A) between the sweeper (5) and the flow side of the sieve (1) of max. 20 mm. The sweeper (5) movement speed is at least 10 m/sec. in relation to the sieve or 20 m/sec. The sweeper (5) exerts little or no pressure or suction pulses towards the surface of the sieve (1). The surface (8) of the sweeper (5) carries a number of longitudinal recesses and pref. grooves (7), or it has a felt covering over the surface (8) which has high absorbency. The openings (6) in the sieve (1) are longitudinal, to separate a fiber fraction, set at an angle of 70-110 degrees to the direction of sweeper (5) movement. Spaced eddies are formed through projections or recesses at the sieve (1), working with the parallel flow (4). An Independent claim is included for an appts. to separate a paper fiber suspension into fractions, where the sweeper (5) has a roughened surface (8). Preferred Features: The grooves (7) at the surface (8) of the sweeper (5) have a height of max. 3 mm, at intervals of max. 3 mm. The projections or recesses at the sieve (1) have a max. height/depth of 2 mm. The sieve (1) is a cylinder, with an inner rotor as the sweeper (5), concentric to each other.

Abstract (de)
Das Verfahren dient zum Fraktionieren einer papierfaserhaltigen Suspension, insbesondere einer Altpapiersuspension. Die Suspension (S) wird durch ein Sieb (1) in zwei Fraktionen aufgeteilt, wobei beispielsweise eine Aufteilung der enthaltenen Papierfasern gemäß ihrer Länge angestrebt wird. Erfindungsgemäß wird eine Parallelströmung (4) mit Hilfe eines Räumers (5) erzeugt, der mit einer rauen Oberfläche versehen ist, so dass die Suspension (S) vom Räumers (5) nahezu schlupffrei mitgeschleppt wird. Es werden ferner besonders geeignete Vorrichtungen zur Durchführung des Verfahrens gezeigt. <IMAGE>

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• [A] DE 19836318 A1 19990715 - VOITH SULZER PAPIERTECH PATENT [DE]
• [A] EP 0299258 A1 19890118 - AHLSTROEM OY [FI]
• [A] US 3411721 A 19681119 - DELCELLIER HENRI A

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