

Title (en)

Method for wet screening fibrous suspensions in pressure screens and pressure screen

Title (de)

Verfahren zum Nasssieben von Faserstoffsuspensionen in Drucksortierern und Drucksortiersieb

Title (fr)

Procédé de tammissage humide de suspensions fibreuses dans des tamis sous pression et tamis sous pression

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Application

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Abstract (en)

[origin: EP1039021A1] The sieve, to sort a paper fiber suspension or separate it into fractions in a pressure sorting assembly, has an entry side which is structured so that the flow direction of the stripping eddy is reversed by the backflow. The backflow flushes the part of the sieve between the sieve opening and its adjacent downstream opening. A part of the fiber suspension flows through the sieve openings and the other part flows over them. The relative movements of the sieve cleaner generate pressure or suction bursts at the sieve openings to give flows forwards and backwards. The backflows are deflected on leaving the sieve openings to reverse the flow direction following the surface of the stripping eddy. The backflow wholly flushes the sieve openings between them and the neighboring downstream openings. The sieve openings are sorting slits (3), with their longitudinal extension across the direction (R) of cleaner movement. The axis of the developed stripping eddy is parallel to the sorting slit (3). The flushing of the sieve is at the side of it towards the cleaner. An Independent claim is included for a fiber suspension sorting sieve where the end surfaces (4) between the sorting slits (3) are extended (6) at the trailing ends (8), to cover the leading ends (7) of the neighboring end surfaces (4) by a length (b) of at least 0.5 mm or at least 1.0 mm. The leading end of the end surfaces and the under side of the extensions (6) over them are at an angle (α) of 3-45 degrees to each other, and pref. 5-25 degrees . The extensions (6) are at the end surfaces (4) at the entry side, where the suspension flows into the sorting slits when the pressure sorter is working. The trailing end is at the side of the end surface (4) which is downstream in relation to the fiber suspension flow (R) in operation. The end surfaces (4) are pitched against the sieve surface (5') at an angle (β) of 5-50 degrees and pref. 10-30 degrees . The under side (9) of the end surface extension (6) is at an angle to the sieve surface (5') of 2-40 degrees and pref. 5-25 degrees . The end surface (4) has no edges which would form an additional build-up when the sieve is in operation. The sorting slits (3) are formed between profiled rods (2) mounted in reinforcements (1). The reinforcements (1) have recesses to hold the rods (2) by tension, as they are distorted on fitting the rods and reassert against them. The reinforcements (1) are rings, to give a cylindrical sieve structure, or the reinforcements (1) and rods (2) are on parallel planes to form a flat sieve. The under sides (9) of the end side extensions (6) have a number of spacer projections distributed over their length, supported by the neighboring end surfaces. The extensions (6) range generally over the whole length of the sorting slits (3). The extensions (6) can be divided a number of times along the sorting slits (3), and they can have an irregular shape along the slits (3). The sieve opening width (w) is 0.08-2.0 mm. The sorting slits (3) have a length which does not exceed 10 mm.

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