

Title (en)

Pressure screen for fibre suspensions and a cleaning rotor for such a screen

Title (de)

Drucksortierer zum Sieben einer Papierfaserstoffsuspension und Siebräumer für einen solchen

Title (fr)

Tamis sous pression pour suspensions fibreuses et un rotor de nettoyage pour un tel tamis

Publication

EP 1036879 A1 20000920 (DE)

Application

EP 00103209 A 20000217

Priority

DE 19911884 A 19990317

Abstract (en)

The pressure sorting assembly, to pass a fiber suspension (S) through a sieve, has a sieve cleaner (8) with different structures according to its position in relation to the suspension carrier flow (T). It gives a number of clearing zones (9-12) where the clearing elements have differing and increasing cleaning effects in the flow direction (T). The sieve cleaning elements differ in their geometric shape and in their type. In one cleaning zone (9,10), the cleaning elements have a ball section shape (13) mounted directly to the body (8') of the sieve cleaner (8). In one section (9-12), the cleaning elements have a hydrodynamic flow profile (14), mounted to the body (8') of the cleaner (8), at a radial gap from it. In one zone (10-12), the cleaning elements have wedge-shaped projections (15) mounted directly to the cleaner body (8'). The sieve (2) is cylindrical, and the cleaning elements in one zone (11,12) are formed by at least one rotating rounded polygon (16), with an outer contour giving different gaps between its periphery and the center of the sieve cleaner (8). The rounded polygon (16) is composed of a number of cylinder segments, fitted together to give an irregular rotating outer contour. The pressure tendency in the cleaning zones (9-12) increases in the flow direction (T). The ball sections (13) are at the zone (9) nearest to the suspension inflow (5), with the hydrodynamic flow profiles (14) in the second zone (10), the wedge-shaped projections (15) in the third zone (11) and the polygon (16) in the final zone (12), in the flow direction (T). The sieve (2) has openings which are smaller in the downstream flow direction (T) than in the upstream section. The sieve (2) can also have slits, narrowing downstream. The round holes in the sieve (2) have the smallest diameter smaller downstream. The sieve cleaner (8) is composed of a number of modules, assembled together by release mountings, where each module has at least one sieve clearing zone (9-12). The modules can be fitted in a variety of successive structures.

Abstract (de)

Der Drucksortierer dient dem Sieben (Sortieren oder Klassieren) einer Papierfaserstoffsuspension. Der Drucksortierer ist mit einem Siebelement (2) ausgestattet, relativ zu dem sich ein Siebräumer (8) bewegen lässt. Erfindungsgemäß ist der Siebräumer (8) mit unterschiedlichen Räumelementen, über die Axialerstreckung des Siebelementes (2) betrachtet, ausgestattet, deren Räumwirkung in Richtung der Transportströmung (T) der Papierfaserstoffsuspension ansteigt. <IMAGE>

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D21D 5/02

IPC 8 full level

D21D 5/02 (2006.01)

CPC (source: EP US)

D21D 5/026 (2013.01 - EP US)

Citation (search report)

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EP 1036879 A1 20000920; **EP 1036879 B1 20040714**; AT E271152 T1 20040715; CA 2301423 A1 20000917; CA 2301423 C 20060711; DE 19911884 A1 20000921; DE 50007034 D1 20040819; US 6311850 B1 20011106

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