

Title (en)
Method for removing impurities from an aqueous paper fiber suspension

Title (de)
Verfahren zur Entfernung von Störstoffen aus einer wässrigen Papierfasersuspension

Title (fr)
Procédé pour éliminer des impuretés d'une suspension aqueuse de fibres à papier

Publication
EP 1050342 A1 20001108 (DE)

Application
EP 00107633 A 20000408

Priority
DE 19920480 A 19990504

Abstract (en)
Selective flotation stages (1,2) are used to separate foreign matter from a fiber suspension (S). The downstream flotation s (2) uses the residual air contained in the cleaned suspension flow (A1) from the first stage (1), without additional air to give bubbles for flotation. The second and downstream stage (2) acts as a flotation cyclone, with a centrifugal acceleration of the hydrocyclone of a v which is 5-200 times the rate of the spin of the earth, or 10-100 times. At the second and downstream flotation stage (2), the suspension from the first stage (1) is fed at a tangent into a cylinder. The flotation foam (R2) formed at the second stage (2) the cleaned suspension (A2) move out of the stage (2) at the axially opposite end to the inlet. The flotation foam (R2) is taken axially from the side of the second flotation stage (2) which also has the inflow, and the cleaned suspension (A2) is taken axia from the opposite side. The weaker force field used is the gravity of the earth. The cleaned suspension (A1) from the first flotation stage (1) is passed directly to the downstream flotation stage (2), without dwelling in a vat.

Abstract (de)
Das Verfahren dient der Entfernung von Störstoffen, z.B. Druckfarben oder Stickies, aus einer wässrigen Papierfasersuspension, insbesondere wenn diese aus Altpapier hergestellt ist. Es werden mehrere selektive Flotationsschritte durchgeführt, von denen der stromaufwärtige Flotationsschritt (1), z.B. im Erdschwerefeld betrieben wird und der unmittelbar stromabwärts folgende Flotationsschritt (2) in einem Flotationszyklon. Dabei wird der Flotationszyklon lediglich mit Hilfe der im Gutstoff (A1) des stromaufwärtigen Flotationsschrittes (1) enthaltenen Restluft, also ohne weitere Luftzugabe betrieben. Das Verfahren ist besonders wirtschaftlich und effektiv. <IMAGE>

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Citation (search report)
• [DYA] EP 0888819 A1 19990107 - VOITH SULZER PAPIERTECH PATENT [DE]
• [DA] DE 4426159 A1 19941208 - VOITH GMBH J M [DE]
• [DY] DATABASE WPI Section Ch Week 8540, Derwent World Patents Index; Class F09, AN 1985-245072 [25], XP002041309

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WO2006045378A1; US7807020B2; US8025761B2; US8025772B2; EP1958697A4

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