

Title (en)

Method for killing germs in a material containing papermaking fibres and apparatus for applying the method

Title (de)

Verfahren zur Abtötung von Keimen in papierfaserhaltigem Material sowie Vorrichtungen zur Durchführung des Verfahrens

Title (fr)

Procédé pour tuer des germes dans un matériau contenant des fibres pour papeterie et dispositif pour l' application du procédé

Publication

EP 0990733 A1 20000405 (DE)

Application

EP 99115241 A 19990802

Priority

DE 19845513 A 19981002

Abstract (en)

[origin: DE19845513A1] To destroy germs in materials containing paper fibers, the infected material (M) is initially degassed virtually completely. It is then heated (1) intensively at least at 80 deg C, followed by dispersion (2). For special handling, chemical additives (CH) are introduced into the process. The material (M) has a residual air content of ≤ 1 vol% before or during the heating stage (1). The degassing is to give a pref. residual air content in the material (M) of ≤ 0.1 vol%. The material (M) is compressed (3) without affecting its water content, at least to a compression stage where the gas-filled hollow zones take in the residual air content. Or the compression changes the water content to give it a solid content of $\sim 15\%$ and pref. 20-35% with a resulting air extraction, directly followed by heating (1). Before or during heating, the compressed material (M) is loosened and flushed with vapor and pref. steam, which also raises the material temp. The steam flow is against the direction of material (M) travel. After the compressed material (M) has been expanded and/or loosened, it is heated to at least 120 deg C, and held in a stack or a flow path for a dwell time of at least 2 secs. at 120 deg C. The material is dispersed (2) or kneaded, directly after the heating stage (1). In preparation for the heating stage (1), the material (1) is mixed with peroxide at a level of at least 4% of the material dry content. The heating is applied without the use of reduction chemicals. The material (M) has a solid content of 15-80 mass%, mainly of used paper. An Independent claim is included for an appts. with a compression stage connected directly to the heating stage, to feed compressed material plugs into the heater. The heating stage has a gas exhaust, and a steam flushing system using steam from the exhaust.

Abstract (de)

Das Verfahren dient der Behandlung von verschmutzten papierfaserhaltigem Material (M), insbesondere wenn die Verschmutzung einen Befall mit Keimen mit sich gebracht hat. Erfindungsgemäß wird der infizierte Papierstoff fast vollständig entgast und dann einer intensiven Heißbehandlung (1) unterzogen, welche eventuell durch eine Dispergierung (2) ergänzt wird. Auch die Zugabe von Chemikalien (CH) kann in speziellen Ausführungsformen das Verfahren verbessern. <IMAGE>

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D21B 1/02

IPC 8 full level

D21B 1/02 (2006.01)

CPC (source: EP)

D21B 1/021 (2013.01)

Citation (search report)

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