

## Title (en)

Paper manufacturing process including a step for fixing of mineral fuller on cellulosic fibres

## Title (de)

Papierherstellungsverfahren mit Fixierung von Mineralfüllstoff auf cellulosischen Fasern

## Title (fr)

Procédé de fabrication d'une feuille de papier comprenant la fixation d'une charge minérale sur des fibres cellulosiques

## Publication

**EP 1076132 A1 20010214 (FR)**

## Application

**EP 99402058 A 19990813**

## Priority

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## Abstract (en)

To bond a charge of a mineral material to the cellulose fibers in a suspension, the fiber suspension as a papermaking pulp contains at least hydrogen carbonates, carbonates or alkaline metal silicates and/or alkaline earths together with a reagent. The bonding material for attachment to the fibers is added as a mineral hydroxide for precipitation of its carbonates or silicates on to the fibers. The fiber suspension contains sodium hydrogen carbonates and also calcium hydrogen carbonates and/or magnesium hydrogen carbonates. The alkali content is completed at 2-30 degrees F. The fiber suspension contains ions of sodium (N+) at a rate of 20-1000 ppm, or ions of calcium (Ca<2> (+) ) at a rate of 5-200 ppm and/or magnesium ions (Mg<2> (+) ) at a rate of 5-200 ppm. The hydroxide mineral charge is a calcium hydroxide either as a concentrated milk or in solid form with a particle size of  $\leq 6 \mu m$ . After the mineral material has precipitated on to the fibers in the suspension, a gas is injected into the suspension containing a carbon dioxide to neutralize and stabilize the pH value of the cellulose fiber suspension. The fiber suspension used is supplied as a pulp of chemically bleached or unbleached fibers, a mechanical pulp, a thermomechanical pulp, or mixtures of pulp types. An Independent claim is included for the production of paper sheets from the pulp of a fiber suspension where mineral materials have been deposited on to the fibers. The wet pulp is fed to a papermaking machine, and the wet sheets are dried.

## Abstract (fr)

L'invention concerne un procédé pour fixer une charge minérale sur des fibres cellulosiques en suspension aqueuse. Selon l'invention, ce procédé consiste à utiliser comme milieu réactionnel une suspension aqueuse de fibres cellulosiques issue d'une fabrication papetière, comprenant au moins des hydrogénocarbonates, carbonates ou silicates de métaux alcalins et/ou alcalino-terreux et à ajouter audit milieu réactionnel, un hydroxyde de la charge minérale, pour précipiter des carbonates ou silicates de la charge minérale sur les fibres. L'invention trouve notamment application dans la fabrication du papier.

## IPC 1-7

**D21H 17/70**; **D21C 9/00**; **D21H 17/67**

## IPC 8 full level

**D21C 9/00** (2006.01); **D21H 17/67** (2006.01); **D21H 17/70** (2006.01)

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## Citation (search report)

- [X] US 5679220 A 19971021 - MATTHEW M C [US], et al
- [A] WO 9009483 A1 19900823 - MO OCH DOMSJOE AB [SE]

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## DOCDB simple family (application)

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