Title (en)
Method and device for impregnating a fibrous material

Title (de)
Verfahren und Vorrichtung zum Imprägnieren eines Fasermaterials

Title (fr)
Procédé et dispositif d'imprégnation d'un matériaux fibreux

Publication
EP 1749918 A1 20070207 (DE)

Application
EP 05013783 A 20050627

Priority
EP 05013783 A 20050627

Abstract (en)
Fibers are fed to an opening unit (1), e.g. fitted with beater rollers, after which weight and initial moisture is measured (2) to determine the required dosing rate. The fibers are then fed to a working chamber (6) in the form of a drum (7) fitted with rotating arms (9) that convey the fiber from the inlet (3) to the outlet (12). Concentrated treatment solution or emulsion is sprayed in controlled amounts into the chamber by nozzles (15) and mixing heads (13) rotating at high speed, e.g. 1500 to 3000 revolutions per minute, to produce a fog. An independent claim is included for the corresponding plant fitted with nozzles and mixing heads, e.g. as a rotary nozzle, incorporating local fiber opening rotors (14). The circumference of the rotors (14) and the shaft (8) is greater than the fiber length. The working chamber (6) can be followed by a drying plant.

IPC 8 full level
D06B 3/02 (2006.01)

CPC (source: EP)
D06B 3/02 (2013.01)

Citation (applicant)
- DE 19829277 A1 20000105 - FRAUNHOFER GES FORSCHUNG [DE]
- DE 4339078 C2 19961128 - ALCHIMEA NATURWAREN GMBH [DE]

Citation (search report)
- [A] US 3393537 A 19680723 - MALCOLM CHAIKIN, et al
- [A] US 4485644 A 19841204 - KENNEDY WILLIAM J [US], et al
- [A] US 4372002 A 19830208 - SMALL EUGENE D [US]
- [A] GB 1217759 A 19701231 - VEPA AG [CH]
- [A] DE 1760583 A1 19711223 - VEPA AG

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR LV MK YU

DOCDB simple family (publication)
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DOCDB simple family (application)
EP 05013783 A 20050627; AT 05013783 T 20050627; DE 112006002353 T 20060626; DE 2006001093 W 20060626; DE 502005004288 T 20050627