Title (en)

METHOD AND DEVICE FOR CONTINUALLY PRODUCING A SUSPENSION OF CELLULOSE IN AN AQUEOUS AMINE OXIDE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR KONTINUIERLICHEN HERSTELLUNG EINER SUSPENSION VON CELLULOSE IN EINEM WÄSSRIGEN AMINOXID

Title (fr)

PROCEDE ET DISPOSITIF POUR PRODUIRE EN CONTINU UNE SUSPENSION CELLULOSIQUE DANS UN AMINOXYDE AQUEUX

Publication

EP 1268556 A1 20030102 (DE)

Application

EP 00979396 A 20000929

Priority

- DE 0003413 W 20000929
- DE 10013777 A 20000320

Abstract (en)

[origin: WO0170819A1] The invention relates to a method for continually producing a suspension of cellulose in an aqueous tertiary amine oxide for the use according to the lyocell method. According to the inventive method, (a) a cellulose suspension is produced by means of cellulose and an amine oxide-free aqueous phase at a mass ratio ranging from 1:3 to 1:40, (b) the cellulose suspension is dewatered to form a material having a cellulose content ranging from 20 to 80 mass- % and (c) the moist cellulose material is mixed with water-containing amine oxide and is conveyed through a horizontal shear zone in such a way that a suspension having an amine oxide content in the liquid phase is produced after mixing, whereby said content ranges from 70 to 80 mass- % and the suspension essentially completely fills the available conveying cross-section in the shear zone. The inventive method is characterised in that, in step (c), water-containing amine oxide in the finely dispersed form is added to the moist cellulose material in a fall zone which is only partially filled by the cellulose material and that the cellulose material which is mixed with the amine oxide is inserted into the shear zone. The invention also relates to a device for carrying out said method that requires comparatively few apparatuses for producing the suspension. The throughput of the cellulose material can be increased, whereby said throughput is related to the volume of the shear zone.

IPC 1-7

C08B 1/00; D01F 2/00; D01D 1/02; C08J 5/18; C08L 1/02

IPC 8 full level

C08B 1/00 (2006.01); **C08F 251/02** (2006.01); **C08L 1/02** (2006.01); **D01D 1/02** (2006.01); **D01F 2/00** (2006.01)

CPC (source: EP US)

C08B 1/003 (2013.01 - EP US); **C08F 251/02** (2013.01 - EP US); **C08L 1/02** (2013.01 - EP US); **D01D 1/02** (2013.01 - EP US); **D01F 2/00** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0170819 A1 20010927; AU 1691601 A 20011003; CN 1235912 C 20060111; CN 1451018 A 20031022; DE 10013777 A1 20011004; DE 10013777 C2 20020620; EP 1268556 A1 20030102; US 7115187 B1 20061003

DOCDB simple family (application)

DE 0003413 W 20000929; AU 1691601 A 20000929; CN 00819351 A 20000929; DE 10013777 A 20000320; EP 00979396 A 20000929; US 22158903 A 20031014