

Title (en)  
METHOD OF TREATING A FIBER WEB AND A TREATMENT SYSTEM FOR TREATMENT OF A FIBER WEB

Title (de)  
VERFAHREN ZUR BEHANDLUNG EINES FASERVLESSES UND BEHANDLUNGSSYSTEM ZUR BEHANDLUNG EINES FASERVLESSES

Title (fr)  
PROCÉDÉ DE TRAITEMENT D'UNE BANDE DE MATIÈRE FIBREUSE ET SYSTÈME DE TRAITEMENT POUR LE TRAITEMENT D'UNE BANDE DE MATIÈRE FIBREUSE

Publication  
**EP 3988713 A1 20220427 (EN)**

Application  
**EP 21196576 A 20210914**

Priority  
FI 20206052 A 20201023

Abstract (en)  
The invention relates to a method of treating a fiber web, in which method the fiber web is sized in a sizer (10) by indirect curtain sizing in a curtain sizer (10), in which the sizing agent (TA, TB) is applied onto at least one side of the fiber web by two sizing rolls (11A, 11B) with metallic or ceramic surface or with polymeric surface, which polymeric surface has surface hardness 60 — 100 shoreD, advantageously 80 - 95 shoreD, in a sizing nip (N), in which the fiber web (W) is sized with high solids content sizing agent (TA, TB) having solids content of 10 — 60 %, preferably 20 — 40 %, and viscosity of 50 cP- 2000 cP, preferably 100 cP — 1500 cP, and the sizing agent (TA; TB) is applied onto the at least one side of the fiber web (W) by the two sizing rolls (11A, 11B), in the sizing nip (N). After the sizing the fiber web (W) is directly guided to contactless and supported drying in an air-borne drying system (20) and the run of the fiber web (W) from the sizing nip (N) to beginning of the drying in the air-borne drying system (20) is not more than 2 m, advantageously not more than 0,5 m, and / or takes not more time than 0,5 s. The invention also relates to a treatment system for treatment of a fiber web, which treatment system comprises a sizer (10), which is a curtain sizer (10) with at least one curtain application device (12A; 12B) for indirect application of sizing agent (TA; TB) and comprises two hard sizing rolls (11A, 11B) with metallic or ceramic surface or with polymeric surface, which polymeric surface has surface hardness 60 — 100 shoreD, advantageously 80 — 95 shoreD, and forming a sizing nip (N), which curtain sizer (10) with the indirect application of sizing agent (TA, TB) is configured to apply the sizing agent (TA, TB) in high solids content of 10 — 60 %, preferably 20 — 40 % and in viscosity of 100 cP or over, preferably 1050 cP— 2000 cP, more preferably 100 cP — 1500 cP. The treatment system further comprises an immediately after the sizer (10) located air-borne drying system (20) such, that the run of the fiber web (W) from the sizing nip (N) to beginning of the drying in the air-borne drying system (20) is not more than 2 m, advantageously not more than 0,5 m, and / or takes not more time than 0,5 s.

IPC 8 full level  
**D21H 23/48** (2006.01); **B05C 1/08** (2006.01); **D21H 19/84** (2006.01); **D21H 21/16** (2006.01); **D21H 23/56** (2006.01)

CPC (source: CN EP)  
**B05C 1/083** (2013.01 - EP); **B05C 9/06** (2013.01 - EP); **B05C 9/14** (2013.01 - EP); **D21H 19/14** (2013.01 - CN); **D21H 19/20** (2013.01 - CN); **D21H 19/22** (2013.01 - CN); **D21H 19/28** (2013.01 - CN); **D21H 19/34** (2013.01 - CN); **D21H 19/84** (2013.01 - EP); **D21H 21/16** (2013.01 - CN EP); **D21H 23/48** (2013.01 - CN EP); **D21H 23/56** (2013.01 - CN EP); **D21H 25/06** (2013.01 - CN)

Citation (applicant)  
"Papermaking Science and Technology", 2009, PAPER ENGINEERS' ASSOCIATION, pages: 404

Citation (search report)  

- [I] US 2010043700 A1 20100225 - TREFZ MICHAEL [DE]
- [I] WO 2004099495 A1 20041118 - METSO PAPER INC [FI], et al
- [I] EP 3617403 A1 20200304 - VALMET TECHNOLOGIES OY [FI]

Cited by  
US2022170192A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3988713 A1 20220427**; **EP 3988713 B1 20231101**; CN 114481691 A 20220513

DOCDB simple family (application)  
**EP 21196576 A 20210914**; CN 202111214965 A 20211019