

Title (en)

METHOD FOR THE SURFACE APPLICATION OF A SECURITY DEVICE OVER A PAPER MACHINE MADE HOLE

Title (de)

VERFAHREN ZUR OBERFLÄCHENAPPLIKATION EINER SICHERHEITSVORRICHTUNG ÜBER EINEM MIT EINER PAPIERHERSTELLUNGSMASCHINE ERZEUGTEN LOCH

Title (fr)

PROCÉDÉ D'APPLICATION EN SURFACE D'UN DISPOSITIF DE SÉCURITÉ SUR UN TROU FORMÉ PAR MACHINE À PAPIER

Publication

EP 3723996 A1 20201021 (EN)

Application

EP 18888658 A 20181214

Priority

- US 201715842142 A 20171214
- US 2018065807 W 20181214

Abstract (en)

[origin: WO2019118904A1] A sheet material (110) having a security device (112) applied over a paper machine made or 'soft-edged' through-hole (111) and a method for preparing such a sheet material (110) is provided. By way of the inventive method, the through-hole(s) is formed in a forming fibrous web before it becomes sufficiently consolidated and then the security device is applied onto the fibrous web and preferably over the through-hole(s) at or near a couch roll or similar tool of a paper machine when the fibrous web constitutes a sufficiently consolidated, fully formed wet web. Applying the security device and then further consolidating the region underlying the device at this stage of paper manufacture when the fibers would not be displaced, greatly reduces (if not eliminates) the possibility of the through-hole(s) becoming occluded or blocked. Moreover, papers made in accordance with the inventive method, when subjected to the Circulation Simulation Test, showed minimal damage at the paper/security device interface. Further, the surface-applied security devices showed acceptable levels of intaglio ink adhesion, and the papers had higher cross-direction (CD) tensile strength and much less show-through on opposing sides thereof.

IPC 8 full level

B42D 25/346 (2014.01); **B42D 25/29** (2014.01); **D21H 27/00** (2006.01)

CPC (source: EP KR)

B42D 25/29 (2014.10 - KR); **B42D 25/324** (2014.10 - EP); **B42D 25/333** (2014.10 - EP); **B42D 25/346** (2014.10 - EP KR); **B42D 25/351** (2014.10 - EP); **B42D 25/36** (2014.10 - EP); **D21H 21/40** (2013.01 - EP KR); **D21H 27/00** (2013.01 - KR)

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)

WO 2019118904 A1 20190620; CN 111511572 A 20200807; CN 111511572 B 20220517; EP 3723996 A1 20201021; EP 3723996 A4 20210721; JP 2021506622 A 20210222; JP 2023106485 A 20230801; KR 102665889 B1 20240513; KR 20200096544 A 20200812; RU 2020123078 A 20220114; RU 2020123078 A3 20220114

DOCDB simple family (application)

US 2018065807 W 20181214; CN 201880080558 A 20181214; EP 18888658 A 20181214; JP 2020532047 A 20181214; JP 2023080271 A 20230515; KR 20207017592 A 20181214; RU 2020123078 A 20181214