

Title (en)

Method and device for removing dust from a moving paper web

Title (de)

Verfahren und Vorrichtung zur Staubabtrennung von einer laufenden Papierbahn

Title (fr)

Procédé et dispositif pour enlever de la poussière d'une bande de papier en défilement

Publication

EP 1101863 A3 20030702 (DE)

Application

EP 00124067 A 20001106

Priority

AT 195099 A 19991118

Abstract (en)

[origin: EP1101863A2] To separate and extract dust from a moving web, especially of tissue paper, the layer of air carried by the moving web is deflected away from the web surface and extracted by suction. It is passed through a separation box which extracts the air evenly across the web width. At the same time, the air carried by the web is separated from its under side by suction. When the dust-laden air is removed, it is replaced by ambient air to prevent the formation of eddies. The web is stabilized before the carried air is separated, and air carried by the stabilizer is led away. An Independent claim is included for an assembly to free the moving tissue paper web of dust with an initial separation box (9) as a stabilizer across the web width, with a curved guide surface (18) for the web (4). A surface air deflector is at the entry side of the separation box (9), to direct the air into a collection channel (21) at the separation box (9). The collection channel (21) has an expanding cross section towards the drive side of the papermaking machine. An adjustable suction slit (19) is at the entry side (18') of the separation box (9). The separation box can be opened across the whole width. A second separation box (10) is under the web (4), where the web runs into it at a small angle pref. of 1-5 degrees and such as 1-2 degrees . The second separation box (10) has a deflection plate (23), pref. with a swing movement, and the box is divided into at least two chambers. A stabilizer (8) is in front of the leading separation box (9), which spreads the paper web (4) across its width, pref. with a swing movement. A funnel-shaped suction hood is at the zone of the scraper (6), on the machine drive side. A further separation box (12) is over the paper web (4).

IPC 1-7

D21G 3/00; B08B 1/02; B08B 5/04

IPC 8 full level

B08B 1/02 (2006.01); **B08B 5/04** (2006.01); **D21F 7/00** (2006.01); **D21G 3/00** (2006.01)

CPC (source: EP US)

B08B 1/20 (2024.01 - EP US); **B08B 5/04** (2013.01 - EP US); **D21F 7/00** (2013.01 - EP US); **D21G 3/00** (2013.01 - EP US)

Citation (search report)

- [X] EP 0310161 A1 19890405 - VALMET PAPER MACHINERY INC [FI]
- [A] US 5800679 A 19980901 - LINDSTROEM JAN [FI], et al
- [A] EP 0646422 A1 19950405 - JAMES RIVER CORP [US]
- [A] US 5878462 A 19990309 - LINDEN ANDERS TOMMY [SE], et al

Cited by

EP1731670A1; EP1746207A3; CN106780983A; CN117228405A

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1101863 A2 20010523; **EP 1101863 A3 20030702**; AT 408462 B 20011227; AT A195099 A 20010415; BR 0005439 A 20010731; CA 2325507 A1 20010518; US 6457204 B1 20021001

DOCDB simple family (application)

EP 00124067 A 20001106; AT 195099 A 19991118; BR 0005439 A 20001117; CA 2325507 A 20001108; US 71275500 A 20001114