

Title (en)

Device for cleaning fabrics, in particular dryer fabrics for the papermaking industry

Title (de)

Vorrichtung zum Reinigen von Gewebe, insbesondere von Trockengewebe für die Papierindustrie

Title (fr)

Dispositif de nettoyage de toiles notamment de toiles de sécherie utilisées dans l'industrie papetière

Publication

EP 1520928 A1 20050406 (FR)

Application

EP 04104799 A 20040930

Priority

FR 0311504 A 20031001

Abstract (en)

A laser irradiation head (4) located on a holder, moves across (D2) the direction of travel (D2) of the cloth (1) on the drying section. The laser irradiation head includes a focusing optical system (6) facing one end of an optical fiber cable (7); a laser unit (8) is connected to its other end. A solid state laser is used to produce energy pulses. It is a multimode laser. The optical system focuses a square spot on the cloth. The head has a protective guard (9) enclosing a space between the optical system and the cloth. The guard has a collection system for contaminant residues, e.g. an air suction nozzle close to the optical system. The holder is located on one side of the cloth, on the other a protective cover (12) faces the path of the cloth, and intercepts waste. A unit (50) measures permeability continuously. A system (21, 22) drives the head as a function of permeability measurements, to clean a succession of zones as a function of their relative blockage. The head is moved back and forth as the cloth is moved along. Cleaning a number of sections inclined with respect to the axis of cloth movement, the entire cloth being swept at the end of a number of cloth rotations. The holder is located close to the first drying cylinder of the drying section.

Abstract (fr)

L'objet de l'invention est un dispositif de nettoyage à sec en continu de toiles (1) de sécherie sur une chaîne de séchage pour papier, le dispositif comportant une tête (4) d'irradiation laser positionnée sur un bâti (5) mobile se déplaçant dans une direction (D1) perpendiculaire au déplacement (D2) de la toile (1) sur la chaîne de séchage. Selon le dispositif, la tête (4) d'irradiation laser peut comporter un système optique (6) de focalisation, en regard d'une première extrémité d'un guide d'onde optique (7), un poste laser (8) étant raccordé à la seconde extrémité du guide d'onde optique (7). <IMAGE>

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IPC 8 full level

D21F 1/32 (2006.01)

CPC (source: EP)

D21F 1/325 (2013.01)

Citation (search report)

- [XA] US 5783044 A 19980721 - SCHNEIDER WOLFGANG [DE], et al
- [A] WO 0220901 A1 20020314 - METSO PAPER INC [FI]

Cited by

EP2383387A1; DE102010028309A1; DE102010028309B4

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