

Title (en)
Doctoring device

Title (de)
Rakelvorrichtung

Title (fr)
Dispositif à racle

Publication
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Application
EP 09154692 A 20090310

Priority
DE 102008000723 A 20080318

Abstract (en)

The doctor blade device comprises a doctor blade unit (3) comprising a head part, which forms a doctor blade holder for a cylindrical doctor bar (8) accommodated in a groove (9) as dosage and/or equalizing element and a tail part (5), which carries the head part and/or the blade holder. The tail part is present in a support girder (10) by a tubular clamp (6). The head part is pressed with a pressing element with respect to a substrate (2) to be coated. The tubular clamp is an integral component of the tail part. The pressing element is non-integral component of the head part. The doctor blade device comprises a doctor blade unit (3) comprising a head part, which forms a doctor blade holder for a cylindrical doctor bar (8) accommodated in a groove (9) as dosage and/or equalizing element and a tail part (5), which carries the head part and/or the blade holder. The tail part is present in a support girder (10) by a tubular clamp (6). The head part is pressed with a pressing element with respect to a substrate (2) to be coated. The tubular clamp is an integral component of the tail part. The pressing element is non-integral component of the head part and is accommodated in an external pressing device and influences the rear side of the head part and/or the blade holder from outside, where the rear side is opposite to the groove. A sealing tube is intended for the head part and/or the blade holder. The pressing element is a pressing tube. The sealing hose is accommodated in a recess of the blade holder. The sealing tube is arranged above the pressing element at the rear side of the head part and/or the blade holder and is present in the external pressing device, in which the pressing tube is accommodated. The tail part is positioned at a contact surface of the support girder. The head part and the tail part are formed as separate components or formed with one another in a single-piece. The head part and/or blade holder are polygonal shaped and the tail part is ring shaped. The head part and/or blade holder and the tail part are decoupled from each other with respect to their thermal expansion, and are positively connected. The head part and/or blade holder comprise another groove, in which the tail part intervenes with a bulge. The pressing tube, the tubular clamp and the sealing tube is formed as round or profile tube e.g. commercial nose hose. The head part and/or blade holder and the tail part are producible from the same material or different hard and/or different thermal materials. The tail part is suitable to carry the head part and/or blade holder in different sizes and shapes dependent on the size of the selected blade bar. A flexible section is present between the head part and/or blade holder and the tail part. The tail part comprises bending points as flexible section. The bending point is implemented as a notch or as a constriction or in form of a leaf spring. The blade bar is produced with a diameter of 8-40 mm with smooth or corrugated surface. An independent claim is included for a coating machine for applying a fluid or pasty application medium e.g. coating colors, on a substrate.

Abstract (de)

Die Erfindung betrifft eine Rakelvorrichtung, umfassend - ein Kopfteil (4), welches ein Rakelbett (7) bildet für einen in einer Nut (9) aufgenommenen zylindrischen Rakelstab (8) als Dosier- und/oder Egalisiererelement und - ein Fußteil (5), welches das Kopfteil (4) bzw. das Rakelbett (7) trägt, wobei das Fußteil (5) in einem Tragbalken (10) mittels einem diesem Fußteil (5) zugeordneten Klemmschlauch (6) gehalten ist und wobei das Kopfteil (4) einschließlich Rakelstab (8) mit einem Anpresselement (12) gegen den zu beschichtenden Untergrund (2) andrückbar ist. Gemäß einer ersten erfindungsgemäßen Lösung ist vorgesehen, dass der Klemmschlauch (6) integraler Bestandteil des Fußteiles (5) ist. Gemäß einer zweiten erfindungsgemäßen Lösung ist vorgesehen, dass das Anpresselement (12) nichtintegraler Bestandteil des Kopfteiles (4) ist und dazu in einer externen Andrückeinrichtung (15) aufgenommen ist und von außen her auf die der Nut (9) gegenüberliegende Rückseite (20) des Kopfteiles (4) bzw. des Rakelbettes (7) einwirkt. Gemäß einer dritten erfindungsgemäßen Lösung ist vorgesehen, dass wenigstens ein Dichtschlauch (27, 30, 32, 34) für das Kopfteil (4) bzw. das Rakelbett (7) vorgesehen ist.

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Citation (search report)

- [DX] DE 102004029565 A1 20060105 - VOITH PAPER PATENT GMBH [DE]
- [X] EP 1485209 B
- [X] EP 0541502 A1 19930512 - VALMET PAPER MACHINERY INC [FI]
- [X] WO 0063494 A1 20001026 - VALMET CORP [FI], et al
- [A] EP 0906788 A2 19990407 - VOITH SULZER PAPIERTECH PATENT [DE]
- [A] DE 19631913 A1 19980219 - VOITH SULZER PAPIERMASCH GMBH [DE]
- [A] DE 19602483 C1 19970605 - VOITH SULZER PAPIERMASCH GMBH [DE]
- [X] DE 29510486 U1 19950817 - VOITH SULZER PAPIERMASCH GMBH [DE]

Cited by
EP2341185A1; EP2570194A1; WO2011076629A1

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