Title (en)

Apparatus for scraping or/and dosing a fluid or pasty material on a moving working surface

Title (de)

Einrichtung zum Abstreifen oder/und Dosieren eines flüssigen bis pastösen Mediums auf einer sich vorbeibewegenden Arbeitsfläche.

Title (fr)

Appareil pour racler ou/et doser un matériau fluide ou pâteux sur une surface de travail en mouvement

Publication

EP 0900879 B1 20021106 (DE)

Application

EP 98114123 A 19980729

Priority

DE 19738356 A 19970902

Abstract (en)

[origin: EP0900879A1] The applicator system to spread a liquid to paste medium, on a moving web surface, has part of the compensation unit (21) in the force flow path between the doctor carrier (15) and the doctor components (7,9) to compensate for the distortion of the doctor carrier (15) in relation to the moving web (3), so that the doctor pressure is unaffected by the distortion. The compensation unit has a fluid and especially pneumatic action, with a force unit (37) and a surface (57) subjected to a pressure medium for transmission to the doctor components (7,9), independently of the distortion at the doctor carrier (15). The pressure medium supply (25) sets and maintains a constant pressure through the medium at the surface (57). The force is applied by a piston/cylinder unit (37) with a cylinder housing (39) and a piston assembly with at least one piston (45) moving in the hollow zone (41) of the housing (39). A pressure chamber (29) is linked to the pressure medium supply (25). A compensating membrane (53) is held at the cylinder housing (39) round its edge to separate the pressure chamber (29) in the hollow zone (41) in a pressure seal, to form the surface (57) under pressure on the side towards the pressure chamber, and in contact with at least one piston (45). The cylinder housing (39) is at the doctor carrier (15), and at least one piston (45) is coupled to the doctor components (7,9) for a common shifting movement. The piston (45) forms a dedicated component for one of the doctor components (7,9), with a release mechanical coupling, especially in pressure contact with the doctor components (7,9). The piston (45) is not guided, however is in a stabilized position and especially in a positive fit with the doctor components (7,9). The pressure chamber (29) extends coherently across the whole width of the web (3). The membrane (53) is a longitudinal strip membrane, to apply the pressure from the pressure chamber (29) together with a number of pistons (45) distributed across the web (3) width. Or a number of separate pressure chambers are across the web (3) width, each with a circular pressure transfer membrane. A given pressure is set at the pressure chamber(s), independently of each other. The doctor components (7,9) are a doctor bed (9) and a rotating doctor rod (7). The doctor carrier (15) has a longitudinal doctor beam (17) to support the doctor bed (9), especially with a leaf spring (11) assembly.

IPC 1-7

D21H 25/08

IPC 8 full level

D21H 25/08 (2006.01); **D21H 25/12** (2006.01)

CPC (source: EP US)

B05C 11/042 (2013.01 - EP US); **D21H 25/08** (2013.01 - EP US); **D21H 25/12** (2013.01 - EP US)

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