Title (en)

Device and process for applying a fluid or pasty material onto a moving bed

Title (de)

Vorrichtung und Verfahren zum Auftragen eines flüssigen oder pastösen Mediums auf eine laufende Materialbahn

Title (fr)

Dispositif et procédé d'application de materiau fluide ou pâteux sur une bande en movement

Publication

EP 0969147 A2 20000105 (DE)

Application

EP 99108451 A 19990430

Priority

DE 19829449 A 19980701

Abstract (en)

At the assembly (10) to apply a liquid or paste coating (18) to the surface of a moving web of paper or cardboard, using a spray curtain applicator (16), a system (30,34) to register the air back pressure determines the pressure of built-up air in front of the strike line (T) of the coating curtain (20) in the direction (L) of web (12a) travel. A control (32) sets the suction power of the air suction unit (24) according to the air back pressure recorded by the measurement system (30,34). The air pressure monitor gives a direct reading of the air back pressure with at least one sensor (30), located in front of the coating curtain (20) strike line (T) in the direction (L) of web (12a) travel. The monitor also has at least one sensor (34) to register the speed of travel by the web surface (12a). The coating medium (18) has a solid content of 5-50% and pref. 30-75%. It contains at least one inorganic or organic pigment and at least one synthetic or natural bonding agent. It is applied in a coating with a weight of 2-40 g/m<2> and pref. 3-30 g/m<2>. The speed of web surface (12a) travel is ≥ 600 m/min. and pref. ≥ 1000 m/min. The web (12) width to be coated is ≥ 2.5 m and pref. ≥ 4.0 m. A scraper bar (36) is in front of the coating strike line (T), in the direction (L) of web travel, to detach any air (26) carried by the moving web surface (12a). In a direct coating application, a unit (38) stabilizes the web (12) movement, such as by a further suction unit (38) which applies an underpressure to the side of the web (12) opposite the coating applicator (16), to draw the web (12) against a support and pref. a support roller (14). An Independent claim is included for a web coating process, where a suction unit (24) extracts air (26) carried by the moving web surface (12a) in front of the coating curtain strike line (T). The suction power of the air extractor (24) is set according to the air back pressure sensor (30) readings. Preferred Features: The sensor (30) gives a direct reading of the air back pressure at the moving web surface (12a) in front of the coating curtain strike line (T). The web (12) movement speed is indirectly registered by a sensor (34).

Abstract (de)

Es wird eine Vorrichtung (10) zum Auftragen eines flüssigen oder pastösen Auftragsmediums (18) auf eine laufende Materialbahn (12), insbesondere aus Papier oder Karton, vorgestellt, bei welcher das Auftragsmedium (18) unter Verwendung eines Schleier-Auftragswerks (16) in Form eines Vorhangs oder Schleiers (20) an die Materialbahn (12) abgegeben wird. Ferner ist eine Saugvorrichtung (24) zum Absaugen von der Materialbahn (12) oder/und von dem Schleier (20) mitgeführter Luft (26, 28) vorgesehen. Eine Staudruck-Bestimmungsvorrichtung (30, 34) bestimmt den Druck der sich in Laufrichtung (L) des Untergrunds (12a) vor der Auftrefflinie (T) des Schleiers (20) auf den Untergrund (12a) stauenden Luft. Eine Steuervorrichtung (32) steuert die Saugleistung der Saugvorrichtung (24) in Abhängigkeit des von der Staudruck-Bestimmungsvorrichtung (30, 34) bestimmten Staudrucks. <IMAGE>

IPC 1-7

D21H 23/48

IPC 8 full level

B05D 1/30 (2006.01); **B05C 5/00** (2006.01); **B05C 9/10** (2006.01); **B05D 7/00** (2006.01); **D21H 23/48** (2006.01)

CPC (source: EP)

D21H 23/48 (2013.01); B05C 5/005 (2013.01); Y10S 118/04 (2013.01)

Cited by

EP1516959A1; DE102011002671A1; DE102011002670A1; US7425246B2; US7473333B2; EP2156898A1; US7909962B2; EP2481850B1

Designated contracting state (EPC)

AT DE FI IT SE

DOCDB simple family (publication)

EP 0969147 A2 20000105; **EP 0969147 A3 20000712**; **EP 0969147 B1 20041006**; AT 278839 T 20041015; CA 2276162 A1 20000101; DE 19829449 A1 20000105; DE 59910696 D1 20041111; JP 2000033316 A 20000202; JP 4495273 B2 20100630; US 6146690 A 20001114

DOCDB simple family (application)

EP 99108451 A 19990430; AT 99108451 T 19990430; CA 2276162 A 19990622; DE 19829449 A 19980701; DE 59910696 T 19990430; JP 18793299 A 19990701; US 34546799 A 19990630