

Title (en)
Multiple curtain painting device

Title (de)
Mehrfach-Vorhangstreichvorrichtung

Title (fr)
Dispositif d'application à rideaux à couches multiples

Publication
EP 2082811 A2 20090729 (DE)

Application
EP 09150999 A 20090121

Priority
JP 2008011583 A 20080122

Abstract (en)

The multiple curtain coating device comprises two curtain applicator heads (10a, 10b), each of which applies first and second application layers (20, 30) of liquid or pasty application medium as curtain on a fibrous material web (w) moving itself in a web direction (L), an air boundary-layer control device (1) arranged above a first applicator head at a transport path of the fibrous material web, and a further air boundary-layer control device arranged between the upstream curtain applicator head and downstream applicator head. The curtain applicator heads are arranged one behind the other. The multiple curtain coating device comprises two curtain applicator heads (10a, 10b), each of which applies first and second application layers (20, 30) of liquid or pasty application medium as curtain on a fibrous material web (w) moving itself in a web direction (L), an air boundary-layer control device (1) arranged above a first applicator head at a transport path of the fibrous material web, and a further air boundary-layer control device arranged between the upstream curtain applicator head and the downstream applicator head. The curtain applicator heads are arranged one behind the other. The curtain moves itself as a result of the force of gravity. The further air boundary-layer control device consists of a cylindrical blow chamber connected to a compressed air supply, a blow box connected to the blow chamber in a downstream direction, and a suction box directly arranged above the blow box in an upstream direction. The blow chamber, the blow box and the suction box extend itself in the transverse direction and/or direction of machine width. The blow chamber and the blow box are connected with one another over passage openings. The blow box is sub-divided into an upper box and a lower box, which are separated from each other by a separating wall. The upper box has a bottom. An air shut-off nozzle is present between the bottom and the outer circumference of the blow chamber and delivers an opposing air opposite to the web running direction. The blow chamber has a beveled flat surface for the formation of the air shut-off nozzle. A downstream guide plate is attached at the lower part of the blow box, extends itself in the moving direction of the web and forms a gap to the upper side of the coated web. The suction box consists of an upper suction box, which is connected to an exhaust gas device, and a lower suction box. The upper and the lower suction boxes are separated from each other by a separating wall. An upstream guide plate is fastened at the lower part of the lower suction box and forms a gap to the surface of the coated web. An air suction opening is formed between the end of the guide plate and the outer surface of the blow chamber. The upper suction box is sub-divided into an upper chamber and a lower chamber, which are again separated from each other by another separating wall. The separating walls have the passage openings. The fibrous material web is guided over supporting rollers spatially arranged from each other. The application heads are arranged in the free path of the fibrous material web. A supporting roller (11) is arranged in the same side of the web assigned with support rolls. The supporting roller supports the web, which moves with high speed, at the upper side of the air boundary-layer control device. The gap between the downstream guide plate and the upper side of the web is 0-5 mm.

Abstract (de)

Die Erfindung betrifft eine Mehrfach-Vorhangstreichvorrichtung zum Auftragen einer ersten Auftragsschicht (20) und einer zweiten Auftragsschicht (30) flüssigen oder pastösen Auftragsmediums auf eine in Bahnrichtung (L) sich bewegende Faserstoffbahn (w), umfassend wenigstens zwei hintereinander angeordnete Vorhang-Auftragsköpfe (10a, 10b), von denen jedes das jeweilige Auftragsmedium als sich im Wesentlichen schwerkraftbedingt bewegendes Vorhang (ca, cb) an die Faserstoffbahn (w) abgibt, wobei am Transportweg der Faserstoffbahn (w) vor dem vorgelagerten Auftragskopf (10a) eine Luftgrenzschichtbekämpfungseinrichtung (A) angeordnet ist. Erfindungsgemäß ist eine weitere Luftgrenzschichtbekämpfungseinrichtung (1) vorgesehen, welche zwischen dem vorgelagerten ersten Auftragskopf (10a) und dem nachgelagerten zweiten Auftragskopf (10b) angeordnet ist.

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• DE 10125376 A1 20021128 - VOITH PAPER PATENT GMBH [DE]
• EP 1208917 A2 20020529 - VOITH PAPER PATENT GMBH [DE]
• EP 1538262 A1 20050608 - VOITH PAPER PATENT GMBH [DE]

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