

Title (en)
Headbox

Title (de)
Stoffauflauf

Title (fr)
Caisse de tête

Publication
EP 1065311 A2 20010103 (DE)

Application
EP 00110781 A 20000520

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DE 19930592 A 19990702

Abstract (en)

The stock inlet (10), for a papermaking or cardboard prodn. machine, has a turbulence generator (12) with a number of parallel lines of tubes (12'). The clamped blades (22) between the tube lines (12') converge towards the jet outlet gap opening (24), where at least a part of the blades (22) within the jet zone (20) have a deviating path from the longitudinal axis (A) of the turbulence generator (12). The blades (22) have a kinked point (26) where the parallel lie of the blades (22) changes into an angled pitch (22) against the center axis (A) to converge at their free ends. The blade kinked points (26) are set to give the required angle of the following blade sections (22) in the jet zone (20) according to the stock inlet operation. The blades (22) have no joints, and their angled lengths (22) are straight, to end within the jet (14). The blades (22) have a thickness of ≤ 18 mm, especially where they are clamped in place. The kink angle is 0-20 degrees and pref. 0-12 degrees, and is set differently at neighboring blades (22) so that the theoretical extension of the blades and the jet lips (16,18) intersect on a line (28). On the Z-direction (z) of the stock inlet (10), the kink angle of the blades (22) away from the center axis (A) is larger than for those blades closer to the axis (A). The blades (22) are deployed in a symmetrical layout, within the jet zone (20), and the kink angle is identical for the blades in symmetrical pairs. The blades are of a plastics material with reinforcement carbon or glass fibers. The blades (22) can be in one piece, bent into shape, or they are of two sections bonded together by an adhesive. The adhesion point is located at the clamped blade sections (22') between the tube lines (12'). The adhesion points are wholly outside the jet zone (20), and in front of the turbulence generator (12) in the flow direction (L), with smooth and flat adhesive bonding surfaces between the blade sections at the adhesion point. The blade sections can also be shaped to give adhesive bonding surfaces in a complementary positive fit with each other. The bonding surfaces for the two blade sections can be at an angle to their longitudinal lines, to give the required kink angle between the sections, with the angle of the surface bonding surfaces parallel to the alignment of the angled blade sections (22). The adhesive bond between the blade sections can also have additional pins. The blades (22) can also be shaped with the required kink angles. The blades (22) are bonded to the turbulence generator (12) or its tubes in a positive fit. The straight blade sections (22') between the turbulence tube lines (12') can have lateral grooves to be engaged by ribs or shoulders at the turbulence tubes. At least a part of the side sections of the blades (22) can be removed using a bayonet connection.

Abstract (de)

Ein Stoffauflauf umfaßt einen Turbulenzerzeuger (12) und eine eine Oberlippe (16) und eine Unterlippe (18) umfassende Düse (14), deren zwischen Ober- und Unterlippe gebildeter Innenraum (20) durch mehrere Lamellen (22) unterteilt ist. Der Turbulenzerzeuger (12) umfaßt mehrere zueinander zumindest im wesentlichen parallele Rohrzeilen (12'). Die zwischen den Rohrzeilen (12') eingespannten Lamellen (22) konvergieren in Richtung des Düsenaustrittsspalt (24), indem zumindest ein Teil dieser Lamellen (22) innerhalb des Düsenraums (20) einen von der Längsachse (A) des Turbulenzerzeugers (12) abweichenden Verlauf besitzt. Die zwischen den Rohrzeilen (12') eingespannten, zu diesen parallelen Endabschnitte (22') der betreffenden Lamellen (22) gehen jeweils über eine Knickstelle (26) in einen zur Längsachse (A) des Turbulenzerzeugers (12) geneigten, im Düsenraum (20) liegenden Lamellenabschnitt (22'') über. <IMAGE>

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