Title (en)

Sealing device and process for sealing pressure zones in a papermachine

Title (de)

Dichtungseinrichtung und Verfahren zur Abdichtung von Druckzonen in einer Papiermaschine

Title (fr)

Dispositif d'étanchéité et procédé pour étanchéifier des zones de pression dans une machine à papier

Publication

EP 0987365 A3 20000719 (DE)

Application

EP 99114588 A 19990726

Priority

DE 19842838 A 19980918

Abstract (en)

[origin: EP0987365A2] The sealing for the sides of at least one over- or under pressure zone (P1,P2), at a moving surface (20) in a papermaking machine has at least one seal (15) at a holding zone (17) of a holder (10) with movement in relation to the holder to bear against the moving surface (20). The holding zone (17) is a clamp holder, where the seal (15) is held by a clamping force through clamping surfaces. The holding zone (17) is generally filled on at least one plane at right angles to the alignment direction of the seal (15). The holding zone is an open channel (17) towards the moving surface (20), with a free square or rectangular cross section surface, and the side walls are the clamping surfaces. At least one clamping surface is formed in part by a clamp unit (130), preferably in a groove (45) in a side wall (11,12) of the holder (10), open towards the seal (15). The clamp (130) acts as a seal, and has elastic distortion with a clamp pressure hose (50). The seal (15) is supported by a pressure hose at the holding zone (17), to press the seal against the moving surface (20). The pressure levels in the support (55) and clamp (50) hoses are equal while the seal (15) is presented to and pressed against the moving surface (20). The pressure hoses (50) are linked to a common pressure source. A moving piston (60) is in the grooves (45) at the side walls (11,12) of the holder (10), between the clamping pressure hoses (50) and the seal (15). The piston (60) is of a material with low elasticity. The surface of the seal (15) towards the moving surface (20) is a wear layer, and the lower end of the seal (15) is a clamping section. The wear layer and clamping section are of different materials from the body of the seal (15). The holder (10) is moved to the moving surface (20) with a unit parallel to the laying direction, and is mounted to a suction/blower box and especially in a spring mounting. The clamping force is set according to the gap between the seal (15) and the moving surface (20) and/or according to the pressure in laying the seal (15) against the moving surface (20). When the seal (15) is in contact with the moving surface (20), the press force on it is set according to the ratio between the clamping force and the bending force to fit the seal (15) to the contour of the moving surface (20). The press force on the seal (15) is reduced down to zero after it comes into contact with the moving surface (20). The clamping force is greater or less than the bending force, and the press force can be reduced to a level which is the difference between the clamping and bending forces.

IPC 1-7

D21F 3/10

IPC 8 full level

D21F 3/10 (2006.01)

CPC (source: EP US)

D21F 3/10 (2013.01 - EP US); Y10S 277/906 (2013.01 - EP US)

Citation (search report)

- [XA] WO 9717490 A1 19970515 - VALMET CORP [FI]
- [DXA] US 5580424 A 19961203 - SNELLMAN JORMA [FI]

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CN113277365A; NL2024951B1; WO2021167448A1

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DOCDB simple family (publication)

EP 0987365 A2 20000322; **EP 0987365 A3 20000719**; **EP 0987365 B1 20040616**; DE 19842838 A1 20000323; DE 59909733 D1 20040722; US 2002060030 A1 20020523; US 6334934 B1 20020101; US 6551460 B2 20030422

DOCDB simple family (application)

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