

Title (en)
Pressing arrangement

Title (de)
Pressanordnung

Title (fr)
Dispositif de pressage

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Application
EP 99105694 A 19990319

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Abstract (en)

The press station, for the extraction of water from a wet fiber web, has powered rollers (6,7) forming press gaps (2,3) at a center roller (4), where one roller (6) has a controlled drive power or speed according to a set nominal value. The other powered roller (7) is neither controlled for drive power nor speed. Or both rollers (6,7) are controlled, and the drive power ratios are constant and/or the ratio of the linear forces is matched to both press gaps (2,3). The powered rollers (6,7) have cylindrical press mantles, with shape stability. The press gaps (2,3) are at a gap from each other, with the controlled press roller (6) after the roller (7) without control in the direction of web travel (8). The flexible press mantle (5) of the center roller (4) is supported internally, at least partially. At least one flexible belt passes through both press gaps (2,3), pref. a powered belt as a blanket, fourdrinier or a press belt. The belt enters the first press gap (3) at a tangent to the powered roller (7), and exits at a tangent to the other press roller (6). The max. linear force applied at the leading press gap (3) and/or its drive power is at least within a given range according to the action at the trailing press gap (2). The press roller (6) at the trailing press gap (2) operates at a higher power than the leading roller (7) at the first press gap (3), with a control action on both rollers (6,7) according to the ratio of the max. linear forces of both rollers (6,7). The ratio between the max. linear forces of both rollers (6,7) is held at a constant level, with a power or current nominal value to both rollers (6,7) which is proportional and pref. equal to the constant ratio of the max. linear forces. The constant ratio value is ≤ 1 , and the ratio of the power or current nominal value equals the constant ratio of the max. linear forces. The internal support (10) for the flexible mantle (5) of the center roller (4) is at the two press gaps (2,3), with pressure adjustment to set the max. linear forces. The pressure applied by the leading internal support (10) is set according to the pressure at the trailing support (10). The pressure at the trailing mantle support (10) is controlled according to a nominal value, which is used to control the pressure applied by the leading support. The control for the trailing mantle support (10) is pref. through a central proportional pressure reduction valve, linked to a hydraulic pressure supply. The leading mantle support (10) is controlled by an additional valve, and pref. an additional proportional sequence valve with a DELTA P function and adjustable within a given range according to the pressure at the trailing support. The additional valve is monitored by a further valve, and pref. a proportional sequence valve with a DELTA Pmax function which opens on breaching a given differential pressure value and gives a pressure compensation between the two supports (10). The press rollers (6,7) can be fitted with pliable mantles, with inner supports opposite the mantle supports (10) at the center roller (4), working at the same pressures.

Abstract (de)

Eine Preßanordnung zur Behandlung einer Materialbahn (1) in mehreren Preßspalten (2, 3) umfaßt eine Walze (4), die einen von innen abgestützten flexiblen Preßmantel (5) besitzt und mit wenigstens zwei weiteren, angetriebenen Walzen (6, 7) jeweils einen Preßspalt (2, 3) bildet. Dabei kann bei einer der angetriebenen Walzen (6) die Antriebsleistung oder die Geschwindigkeit entsprechend einem vorgegebenen Sollwert geregelt sein, um auf einfache Weise insbesondere eine gleiche Geschwindigkeit der angetriebenen Walzen (6, 7) zu gewährleisten. Vorteilhafterweise ist auch eine solche Ausführung möglich, bei der die maximale Linienkraft und/oder die Antriebsleistung eines in Bahnlaufrichtung (8) betrachteten vorderen Preßspaltes (3) zumindest innerhalb eines bestimmten Bereichs in Abhängigkeit von der maximalen Linienkraft bzw. der Antriebsleistung eines in Bahnlaufrichtung (8) betrachteten hinteren Preßspaltes (2) steuer- und/oder regelbar ist. <IMAGE>

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