

Title (en)  
Paper machine

Title (de)  
Papiermaschine

Title (fr)  
Machine à papier

Publication  
**EP 1072721 A2 20010131 (DE)**

Application  
**EP 00106510 A 20000325**

Priority  
DE 19934875 A 19990724

Abstract (en)

The press section (4) of a papermaking or paper finishing machine has only one press gap formed by two press rollers (5). The paper web (1) is flanked by two press blankets (6,7) through the press gap. The water is extracted at the web formation stage (2) so that the paper web (1) is formed from the pulp with a dry content of at least 18% and preferably at least 20%. The initial drying group (8) of the drying section (3) has max. three heated drying cylinders (9), where the web (1) passes partially round them. The web (1) is given a constant support by at least one roller or a blanket in its movement path between the web formation stage (2) to the end of the initial drying group (8). The press gap has a length of  $\geq 300$  mm and preferably  $\geq 500$  mm. The linear force at the press gap is  $\geq 800$  KN/m and preferably  $\geq 1000$  KN/m and especially  $\geq 1200$  KN/m. A suction unit (12) is at the web formation stage (2), before the transfer point of the web (1) to the press section (4), to give it a dry content of at least 18% and preferably at least 20%. The web (1), together with at least one continuous water absorbent and/or water permeable blanket (15), is moved through an initial press gap (16) formed by two rollers at the web formation stage (2), before the transfer to the press section (4). The initial press gap (16) is formed by a suction roller (17) and a press roller (18), and the water permeable blanket (15) is formed by the fourdrinier (10) round the suction roller (17). At least one roller is a press roller (18), with a water absorbent blanket (15) round it as a press blanket (19). A wetting unit (13) is in front of the press gap at the press section (4), preferably as a steam box, to set the lateral moisture profile of the web (1). Sensors (14) to measure the lateral moisture profile of the web (1) are in the press section (4) and/or at a following stage and preferably the drying section (3), which set the working at least of the wetting unit (13). The sensors (14) also adjust the working of the suction unit (12) and/or the initial press gap (16) at the web formation stage (2). The web (1) follows a horizontal or an angled downwards path at the press gap. A trough (20) is over the upper press blanket (6) to catch water spun away from the upper press roller (5)./ The initial drying group (8) comprises max. two heated drying cylinders (9), and preferably only one. The paper web (1) is in a weight of 50-200 g/m<sup>2</sup> and preferably 50-100 g/m<sup>2</sup>, of wood-free fibers. The web (1) travels at a speed of not more than 1500 m/min.

Abstract (de)

Die Erfindung betrifft eine Maschine zur Herstellung und/oder Veredelung einer Faserstoffbahn (1) mit einer Pressenpartie (4) zur Entwässerung dieser, einem vorgelagerten Former (2) zur Blattbildung und einer nachgeordneten Trockenpartie (3) zur Trocknung der Faserstoffbahn (1). Davon ausgehend soll die Pressenpartie (4) möglichst einfach und effizient gestaltet werden. Erreicht wird dies dadurch, daß die Pressenpartie (4) aus nur einem, von zwei Presswalzen (5) gebildeten Preßspalt besteht, durch den neben der Faserstoffbahn (1), beidseitig dieser angeordnet, jeweils zumindest ein Preßfilz (6,7) geführt ist, die Faserstoffbahn (1) im Former (2) auf einen Trockengehalt von mindestens 18% entwässert wird, die erste Trockengruppe (8) der Trockenpartie (3) aus höchstens 3 beheizten Trockenzylindern (9) besteht, welche von der Faserstoffbahn (1) teilweise umschlungen sind und die Faserstoffbahn (1) vom Former (2) bis zum Ende der ersten Trockengruppe (8) ständig von wenigstens einer Walze oder einem Band gestützt ist. <IMAGE>

IPC 1-7  
**D21F 3/02**; **D21F 5/04**

IPC 8 full level  
**D21F 3/04** (2006.01); **D21F 3/02** (2006.01); **D21F 5/04** (2006.01); **D21F 9/02** (2006.01)

CPC (source: EP US)  
**D21F 3/045** (2013.01 - EP US); **D21F 9/02** (2013.01 - EP US)

Cited by  
EP1978154A1; WO2013034331A1; CN111501396A; EP1281807A3; DE102011083367A1; WO2004022845A1; WO2016083172A1; DE102011004565A1; WO2012113467A1; DE102011082161A1; US7192507B2; DE102010031447A1; DE102011005747A1; WO2012126875A1; DE102010031450A1; WO2012007212A1; DE102011081239A1; EP2305882A2; DE102009045177A1; DE102009045185A1; DE102011004568A1; WO2012113466A1; EP2678471B1; EP1936026B2

Designated contracting state (EPC)  
DE FI SE

DOCDB simple family (publication)  
**US 6638395 B1 20031028**; CA 2314347 A1 20010124; CA 2314347 C 20081230; DE 19934875 A1 20010125; DE 50013082 D1 20060810; EP 1072721 A2 20010131; EP 1072721 A3 20010822; EP 1072721 B1 20060628; JP 2001049589 A 20010220; JP 4717985 B2 20110706

DOCDB simple family (application)  
**US 59028900 A 20000609**; CA 2314347 A 20000719; DE 19934875 A 19990724; DE 50013082 T 20000325; EP 00106510 A 20000325; JP 2000196505 A 20000629