Title (en)

Method and device for stock preparation

Title (de)

Verfahren und Vorrichtung zur Stoffaufbereitung

Title (fr)

Procédé et dispositif pour la préparation de la pâte

Publication

EP 1126077 A2 20010822 (DE)

Application

EP 00125658 A 20001123

Priority

DE 10005694 A 20000209

Abstract (en)

The pulp preparation station, for the stock inlet of a papermaking or cardboard production machine, has an angled mixing pipe (30) to take the recirculating water from the water extracted from the web at the fourdrinier stage, with a main flow direction through it. Separate and fresh pulp components of the fiber and/or bulking agent materials are fed into the mixing pipe (30) by jets. The flow speed through the mixing pipe (30) is ≥ 0.2 m/sec. and preferably ≥ 0.45 m/sec. The flow speeds of the delivered suspension in a jet (VD) and the main flow of the environment around the jets (VU) are in a ratio VD divided by VU of 3-15. At least a part of the residual recirculating suspensions (36,37) are mixed together in the mixing pipe (30), downstream of the feed jets. The separate pulp components are fed into the mixing pipe (30) before its angular kink, and the residual recirculating suspensions (36,37) are fed into the pipe after the kink. The relative volume ratios of the separate pulp components are controlled by fibers, through measurement of the pulp concentration at the outlet of the mixing pipe (30). One leaving the mixing pipe (30), the pulp passes through a sorting and/or a sifting stage before it reaches the stock inlet. An Independent claim is included for the pulp preparation section of a papermaking or cardboard production machine, with a mixing pipe (30) to take in the recirculating water (38) from the fourdrinier section, to form a main flow through the pipe (30). A number of separate jets (1-6) are mounted at the mixing pipe (30), along the line of the main flow, to deliver the components of the pulp to be formed into a web. The jet stream speeds are structured with the main flow speed through the mixing pipe, where the flow speed through the mixing pipe (30) is ≥ 0.2 m/sec. and preferably ≥ 0.45 m/sec. The flow speeds of the delivered suspension in a jet (VD) and the main flow of the environment around the jets (VU) are in a ratio VD divided by VU of 3-15. Preferred Features: The separate jets (1-6) are deployed in succession along the main flow direction through the mixing pipe (30). The mixing pipe (30) also has a feed inlet jet (35) for usable pulp (36) from a cleaning stage and/or pulp (37) from sifting and/or other recirculating pulps. The separate pulp components fed into the mixing pipe (30) by the individual jets (1-6) are thermo mechanical pulp (TMP) and/or de inked used paper (DIP) and/or rejected material from the papermaking machine and/or retained filtered matter and/or dyes and/or chemicals and/or bulking agents.

Abstract (de)

Die Erfindung betrifft ein Herstellungsverfahren für Stoffsuspension durch Zumischen von neu aufbereitetem Faser- und Füllstoff zu einem Siebwasserkreislauf und einen konstanten Teil einer Papiermaschine mit einem Mischrohr (30). Die Erfinderung ist dadurch gekennzeichnet, daß eine Vielzahl von einzelnen Eindüsungen (1-6) in das Mischrohr (30) zur Erzeugung einer endgültigen Stoffsuspension genutzt wird, wobei die freien Strömungsquerschnitte im Mischrohr (30) und in den einzelnen Eindüsungen (1-6) so gestaltet sind, daß die Strömungsgeschwindigkeit im Mischrohr (30) größer 0,2 m/s, vorzugsweise größer 0,45 m/s ist und die Strömungsgeschwindigkeiten der zugeführten Suspension in einer Düse vD und der Hauptströmung der Umgebung um die Düse vU ein Verhältnis von vD/vU zwischen 3-15 bilden. <IMAGE>

IPC 1-7

D21F 1/00; D21F 1/66

IPC 8 full level

D21F 1/00 (2006.01); **D21F 1/66** (2006.01)

CPC (source: EP)

D21F 1/00 (2013.01); **D21F 1/66** (2013.01)

Cited by

EP2435631A4; EP1467018A1; ITFI20120154A1; EP2690216A1; CN103572636A

Designated contracting state (EPC)

AT DE FI SE

DOCDB simple family (publication)

EP 1126077 A2 20010822; **EP 1126077 A3 20020123**; DE 10005694 A1 20010816

DOCDB simple family (application)

EP 00125658 A 20001123; DE 10005694 A 20000209