Title (en)

Mixing and recirculation circuit

Title (de)

Misch- und Rezirkulationskreislauf

Title (fr)

Circuit de mélange et de recirculation

Publication

EP 0971069 A2 20000112 (DE)

Application

EP 99106910 A 19990408

Priority

DE 19830600 A 19980709

Abstract (en)

The system for the mixing and recirculation of fiber pulp with returned extracted water from the fourdrinier section, at a machine for the production of paper or cardboard with a stock inlet using controlled dilution water, has a unit (17) to increase the pressure in the path between the mixing vessel (7) and the vessel (1) to hold extracted water from the fourdriniers. The mixing vessel (7) has one chamber (7.1) with a number of feeds (4-6), and a second chamber (7.2) with at least one take-off (15) to the extracted water vessel (1). An overflow (19) gives a flow connection between the two mixing vessel chambers (7.1,7.2). An impeller pump (17), between the mixing (7) and extracted water (1) vessels gives the increased pressure. A control valve (18) is in the connection between the two vessels (7,1). A control circuit (16.1,16.2) determines the fluid level in the mixing vessel (7). Two concentric feed pipes (19,20) give a feed of fresh matter and the return flow at the extracted water vessel (1). An additional concentric pipe (21) at the feed and backflow pipes (19,20) takes the inflow into the extracted water vessel (1) from the cleaning station overflow. A gap is between the pipes (19-21) in the flow direction, and their ends are positioned from the outwards towards the inwards, in sequence. The feed tube (21) for the backflow ends before the end of the feed pipe (19), A mixer, such as a propeller, is in the mixing vessel (7). An Independent claim is included for the operation of the system, where the extracted water is taken from the wet section of the machine to be passed to a container (1). The mixing vessel (7) takes the backflow from the recirculating pulp at the stock inlet, the usable suspension from at least one vertical sorting stage and the backflow from a pulp cleaning stage, to be mixed together. The backflow (4-6) is injected into the lower section of the extracted water vessel (1) through a pressure increase unit (17) such as a pump, to be mixed with the extracted water and fresh material (8). The mixture is delivered to the stock inlet through a cleaning stage and/or a vertical sorter. Preferred Features: The backflow (4-6) is fed into the first mixing chamber (7.1), to pass to the second chamber (7.2) through an overflow, and is passed to the extracted water vessel (1) by a pump (17). The backflow (4-6) is controlled by a level monitor at the mixing vessel (7). The backflow (4-6) and the fresh material (8) pass into the extracted water vessel (1) through two concentric pipes (19,20), and the overflow (22) from the cleaning stage is passed into the lower section of the extracted water vessel (1), using an assembly of three concentric pipes (19-21).

Abstract (de)

Die Erfindung betrifft einen Misch- und Rezirkulationskreislauf im konstanten Teil einer Papier- oder Kartonmaschine mit einem verdünnungswassergeregeltem Stoffauflauf und ein entsprechendes Verfahren zum Mischen und Rezirkulieren von Stoffsuspensionen, Siebwasser und Rückläufen. Die Erfindung ist dadurch gekennzeichnet, daß zwischen dem Mischbehälter (2) und dem Siebwasserbehälter (1) ein Mittel zur Druckerhöhung (17) vorgesehen ist. <IMAGE>

IPC 1-7

D21F 1/66

IPC 8 full level

D21F 1/66 (2006.01)

CPC (source: EP US)

D21F 1/66 (2013.01 - EP US)

Citation (applicant)

- US 4477313 A 19841016 - ANDERSSON ANDERS I [SE]
- DE 19509522 A1 19960926 - VOITH SULZER PAPIERMASCH GMBH [DE]

Designated contracting state (EPC)

AT DE FI SE

DOCDB simple family (publication)

EP 0971069 A2 20000112; **EP 0971069 A3 20000628**; **EP 0971069 B1 20030326**; AT 235597 T 20030415; DE 19830600 A1 20000113; DE 59904692 D1 20030430; US 6277243 B1 20010821

DOCDB simple family (application)

EP 99106910 A 19990408; AT 99106910 T 19990408; DE 19830600 A 19980709; DE 59904692 T 19990408; US 34577699 A 19990701