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54 Means for defibrating and sorting pulp in paper and cellulose industry.

57 A means for defibrating and sorting pulp in paper and cellulose industry, comprising a defibrating means (1,2) consisting of a rotor (2) and a stator (1), and of a sorter (3,4) consisting of another rotor (3) and another stator (4), and said stator (4) of the sorter is formed to be sieve-like, and said means comprising a pulp feed (4), accept removal (7) and reject removal (8). At present, defibrating and sorting processes have to be carried out using separate apparatus, which is expensive and space-consuming. With the aid of the present invention, the problem is solved in that the rotors (2,3) of the defibrating means (1,2) and of the sorter (3,4) are only connected to each other with a common shaft, and that the stators (1,4) are separate, and said stators (1,4) and rotors (2,3) are located in the same pulp space (5).

Description

Means for defibrating and sorting pulp in paper and cellulose industry

The present invention concerns a means for defibrating and sorting pulp in paper and cellulose industry, comprising a defibrating means consisting of a rotor and a stator, wherebetween is established a defibrating zone, and a sorter consisting of another rotor and another stator, and the stator of said sorter having been formed to be sieve-like, and said means comprising a pulp feed, removal of accept and removal of reject.

Apparatus in present use are usually separate defibrators and sorters. Also such apparatus exists which both defibrates and sorts simultaneously.

However, existing technology is embarrassed by numerous problems. One problem is that several units are required, whereby the price is high and much space is needed. Simultaneous defibrating and sorting require a heavy and expensive construction. It is also a fact that simultaneous defibrating and sorting are not controllable. As a rule, defibrating and sorting take place at different consistency.

The object of the present invention is to provide a means similar to that described above for defibrating and sorting pulp in paper and cellulose industry, but which is not true of current problems. The means of the invention is characterized in that the rotors of the defibrating means and the sorter only are connected to one another by means of a common shaft and the stators are separate, and said stators and rotors are located in the same pulp space.

As advantages of the invention may be mentioned, for instance, that without changing the sorting process the defibrating efficiency can be steplessly regulated. By pre-defibrating, the fibre flocs can be dispersed, whereby only particles which are not fit to be included in the accept pump are removed. Similarly, the defibrating stage or the sorting stage may, if desired, be cut out from the means. When the speed of rotation range is properly chosen, the fluidizing effect of the defibrator enables efficient sorting in the same consistency range.

The invention is described in the following in detail by referring to the drawing attached, in which the figure presents the means of the invention for defibrating and sorting pulp.

In the figure is indicated the stator of the defibrating means by reference numeral 1 and the rotor of the defibrating means by reference numeral 2, said rotor being rotating, as its name indicates. Pulp feed to the space between the stator and rotor blades of the defibrating means is carried out through a connector 6. In the space between the blades the pulp is defibrated and proceeds onwards into the sorter rotor 3 established in the same pulp space 5. The rotor 2 of the defibrating means and the rotor 3 of the sorter have a rotating shaft 9 in common. On the strength of its rotation movement the sorter rotor 3 throws the fibres of appropriate size through the stator 4 of the sorter, formed to be sieve-like, said fibres existing through an accept connector 7. The particles which do not pass the sieve 4 exit through the reject connector 8, as it is

customary in sorters.

It is obvious to a person skilled in the art that the invention is not confined to the embodiment example presented in the foregoing and that it may be varied within the scope of the claim stated below. Therefore, the mode of operation of the means need not be like that described in the foregoing, but the means may operate in that the feed is carried out through a reject connector 8, whereby a sorting process takes first place, and thereafter, the reject is defibrated.

Claims

A means for defibrating and sorting pulp in paper and cellulose industry, comprising a defibrating means (1,2) consisting of a rotor (2) and a stator (1), wherebetween is and of a sorter (3,4) consisting of another rotor (3) and another stator (4), and which stator (4) of the sorter is being formed to be sieve-like, and said means comprising a pulp feed (6), accept removal (7), and reject removal (8), characterized in that the rotors (2,3) of the defibrating means (1,2) and of the sorter (3,4) are only connected to one another with a common shaft, and that the stators (1,4) are separate and which stators (1,4) and rotors (2,3) are located in the same pulp space (5).

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