

Title (en)  
TUBE BUNDLE APPARATUS

Publication  
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Application  
**EP 89114306 A 19890803**

Priority  
DE 3831385 A 19880915

Abstract (en)  
[origin: EP0358921A1] In the case of tube bundle apparatuses which are used to treat liquids liable to become contaminated and encrusted, and which are operated with self-cleaning foreign particles, a range of problems arise with respect to the danger of sedimentation and of removal of the abrasive solid particles (14) conducted in the circulation, and to the wear of the pumps (16). Moreover, in the previous methods narrow limits arise for the rates of flow and the particle size. The design, which is dictated by the process engineering, is always perpendicular and only single-flow, also limits the possibilities for use. As a result, tube bundle apparatuses of this type have so far not been able to establish themselves in many spheres. The object of the invention is to avoid the known disadvantages by means of a special method, which enables a wide application of such apparatuses and allows simple, space-saving systems. This object is achieved when solid particles (14), preferably having the same or only slightly higher specific weight as that of the medium to be treated, are mechanically separated in the tube bundle apparatus and are conducted together with a subflow of the treated medium via a jet pump (16) and a return line (19). The method is particularly suitable for heating or cooling liquids liable to form sediments or to become encrusted, because it improves the self-cleaning characteristics of tube bundle apparatuses. <IMAGE>

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IPC 8 full level  
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Cited by  
FR2863697A1; CN107764108A; CN106440869A; NL1019670C2; CN104713413A; GB2318165A; GB2318165B; US6570167B1; WO03056266A1; WO2005066573A1; WO2015183641A1

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