

Title (en)

Mechanical device to improve the transfer of heat and to prevent clogging of heat exchangers.

Title (de)

Mechanische Vorrichtung zur Verbesserung des Wärmetausches, sowie zur Verhinderung der Verschmutzung von Wärmetauschern.

Title (fr)

Dispositif mécanique destinés à améliorer les transferts thermiques et à prévenir l'encrassement des échangeurs de chaleur.

Publication

**EP 0174254 A1 19860312 (FR)**

Application

**EP 85401696 A 19850829**

Priority

FR 8413518 A 19840831

Abstract (en)

1. A heat exchanger comprising a plurality of tubes (1) in which a fluid circulates and in at least one of which is disposed a movable element formed by a metal coil in the form of a solenoid, at least one end of which is held in position by a coupling system such that said movable element can be caused to rotate by the fluid so as to prevent said tube from becoming clogged and to improve heat transfer, said exchanger being characterised in that said movable element (2) in the form of a solenoid is rigid and non-deformable so that it can be caused to rotate without coming into contact with the inner wall of said tube (1) during its movement, while said coupling system comprises an outer fastening means to said exchanger tube and a mechanical connection (4) enabling said movable element to rotate freely on its own axis, about the axis of said exchanger tube.

Abstract (fr)

L'invention concerne un dispositif mécanique destiné à être placé à l'intérieur d'un tube d'échangeur thermique (1), en vue de prévenir son encrassement et d'améliorer les transferts thermiques, ce dispositif comprenant au moins un élément mobile (2) et au moins un système d'accrochage (3, 4, 5) de cet élément mobile. Ledit élément mobile (2) est un enroulement métallique de forme solénoïde indéformable, suffisamment rigide pour prévenir le raclage des parois du tube (1) et qui peut être mis en rotation permanente par le fluide circulant dans ledit tube d'échangeur (1), tandis que ledit système d'accrochage comprend un moyen de fixation (3, 5) et une liaison mécanique (4) permettant la libre rotation dudit élément mobile sur lui-même, autour de l'axe dudit tube d'échangeur.

IPC 1-7

**F28F 13/12**; F28F 19/00; F28G 3/08

IPC 8 full level

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CPC (source: EP)

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