

Title (en)

Apparatus in which heat is transmitted through hollow fibres.

Title (de)

Vorrichtung, bei welcher Wärme durch Hohlfäden übertragen wird.

Title (fr)

Dispositif dans lequel la chaleur est transmise à travers des fibres creuses.

Publication

EP 0086268 A1 19830824 (DE)

Application

EP 82111327 A 19821207

Priority

DE 3205571 A 19820217

Abstract (en)

1. An apparatus in which heat is transmitted from a first fluid to a second fluid through the walls of hollow filaments, in which the hollow filaments open into distributing or collecting pipes which have connecting parts for the supply or discharge of the fluid and to which the end sections of the hollow filaments are connected in a fluid-tight manner outwards by means of a packing composition, in which the hollow filaments are held by a support frame which is at least partially formed by the distributing and collecting pipes, in which at least a part of the hollow filaments is at least curved or bent once continuously or discontinuously, in which the hollow filaments are arranged in at most two layers, in which two-layer arrangement of the hollow filaments the hollow filaments of the first layer cross the hollow filaments of the second layer and contact the crossing hollow filaments at the crossing points, in which the hollow filaments of each layer are supported by support rods which cross the hollow filaments and are firmly connected to the support frame and the hollow filaments at the contact points thereof, in which the hollow filaments of each layer are arranged at a spacing from each other, in which the maximum excursion of each curved or bent hollow filament is from a twentieth to a fifth of the distance between the two ends thereof, and in which the hollow filaments do not lie in a plane but in a spatially curved or arched surface, characterised in that the end sections of the hollow filaments (7) are arranged in sealing ridges (1, 2) and are connected thereto in a fluid-tight manner outwards, which ridges have recesses-grooves (3, 4) adapted to the end sections of the hollow filaments (7), and that the sealing ridges (1, 2) are optionally partially admitted into the distributing or collecting pipes (8), but are in each case connected thereto in a fluid-tight manner outwards.

Abstract (de)

Vorrichtung zur Wärmeübertragung zwischen zwei Fluiden durch die Wandung von Hohlfäden (7) mit verbesserten nach außen fluiddichten Verbindungen zwischen den Endabschnitten der Hohlfäden und den Verteiler- bzw. Sammelrohren (8) und verbesserten nach außen fluiddichten Steckverbindungen (9, 11) zum Zusammenfügen mehrerer Vorrichtungseinheiten, wodurch die Abdichtung schneller und einfacher und mit noch grösserer Zuverlässigkeit und noch längerer Haltbarkeit erreicht wird. Die Erfindung besteht darin, daß die Endabschnitte der Hohlfäden (7) in Dichtleisten (1, 2) angeordnet sind, welche den Hohlfäden-Endabschnitten angepaßte Ausnehmungen bzw. Aussparungen (3, 4) aufweisen und welche in die Verteiler- bzw. Sammelrohre (8) eingelassen und mit diesen nach außen fluiddicht verbunden sind, sowie darin, daß in die Anschlußstutzen der Steckverbindungen Verbindungsteile (9, 11) eingeschoben sind, die mit Ringnuten (10) und darin angeordneten Dichtungen (12) versehen sind.

IPC 1-7

F28F 21/06; **F28F 9/16**

IPC 8 full level

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Citation (search report)

- [A] DE 1601193 A1 19700618 - BAYER AG
- [A] GB 1141102 A 19690129 - ASS ELECT IND
- [A] GB 1261905 A 19720126 - ATOMIC ENERGY AUTHORITY UK [GB]
- [A] US 3422884 A 19690121 - OTTEN PHILIP SEITER
- [A] US 4213498 A 19800722 - VANDENBOSSCHE BENJAMIN E [US]
- [A] US 3435893 A 19690401 - WITHERS MICHAEL S

Cited by

DE102017216951A1; DE102017216952A1; FR3061767A1; CN110366668A; US8006750B2; WO2018127642A1; WO2014071925A3

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