

Title (en)

HEAT EXCHANGER HAVING HELICALLY COILED TUBES PROVIDED WITH MEANS FOR TUBE SUPPORTING

Publication

EP 0197812 B1 19890111 (FR)

Application

EP 86400497 A 19860310

Priority

FR 8503756 A 19850314

Abstract (en)

[origin: EP0197812A1] 1. Heat exchanger having tubes (18), support plates (30) with perforations (32, 132) traversed by the tubes and frustum-shaped securing bushes (24, 124), at least one of these bushes being placed around each tube in a perforation (32, 132) formed in a corresponding support plate (30) and crimped on said support plate, characterized in that the tubes (18) are helically wound in successive layers about a common axis (x, x'), each layer of tubes (18) traversing a row of perforations (32, 132) formed in a different support plate (30), the said perforations (32, 132) being radially open (31) with respect to said axis (x, x') over a width slightly exceeding the external diameter of the tubes (18), connecting parts (38, 138, 238) being placed between the support plates of two layers of successive tubes, said parts allowing a relative displacement between the plates in a radial direction (y, y') with respect to said axis (x, x') whilst still providing a relative securing effect between the plates in a transverse direction (z, z') orthogonal to said axis (x, x') and to said radial direction (y, y').

IPC 1-7

F28F 9/00; **F28D 7/00**

IPC 8 full level

F28D 7/02 (2006.01); **F28D 7/16** (2006.01); **F28F 9/00** (2006.01); **F28F 9/013** (2006.01)

CPC (source: EP)

F28D 7/028 (2013.01); **F28F 9/0132** (2013.01); **F28D 2021/0054** (2013.01)

Cited by

CN106767105A; GB2456628A; GB2456628B; US2020263937A1; US11047631B2

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