

Title (en)

Dismountable heat exchanger with hairpin tubes in parallel planes.

Title (de)

Zerlegbarer Wärmetauscher mit Haarnadel-Rohren in parallelen Ebenen.

Title (fr)

Echangeur de chaleur démontable à tubes en épingles à cheveux disposés dans des plans parallèles.

Publication

EP 0442795 B1 19940601 (FR)

Application

EP 91400333 A 19910212

Priority

FR 9001748 A 19900214

Abstract (en)

[origin: EP0442795A1] Dismountable heat exchanger for heat exchange between a fluid flowing inside multiple horizontal hairpin tubes (2), which are mounted on vertical tubular plates (13, 14, 15) orthogonal to the tubes, and a gas loaded with solid particles circulating around these tubes (2) inside an enclosure (1) of rectangular parallelepipedal shape, each tube being connected at the inlet and at the outlet by branches (7, 8) passing through the walls of the enclosure, the said tubular plates (13, 14, 15) being pierced with oval windows (19) forming slots at right angles to the bends of the tubes, and circular openings (20) at right angles to the straight lengths of the tubes, characterised in that the oval windows are pierced at right angles to the bends (11) of the tubes (2) located on the side of the wall traversed by the branches (7, 8) and in that the wall (3) of the enclosure opposite that traversed by the branches (7, 8) is dismountable. The replacement of a tube (2) is very easy and does not require the dismounting of the tubular plates (13, 14, 15). <IMAGE>

IPC 1-7

F28F 9/00; **F28D 7/08**

IPC 8 full level

F28D 7/08 (2006.01); **F28F 9/013** (2006.01)

CPC (source: EP)

F28D 7/08 (2013.01); **F28D 7/087** (2013.01); **F28F 9/0131** (2013.01); **F28F 2280/02** (2013.01)

Cited by

JP2014105883A; US5871045A; DE29510720U1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0442795 A1 19910821; **EP 0442795 B1 19940601**; AT E106541 T1 19940615; DE 69102159 D1 19940707; DE 69102159 T2 19940908; DK 0442795 T3 19940725; ES 2056590 T3 19941001; FR 2658278 A1 19910816

DOCDB simple family (application)

EP 91400333 A 19910212; AT 91400333 T 19910212; DE 69102159 T 19910212; DK 91400333 T 19910212; ES 91400333 T 19910212; FR 9001748 A 19900214