

Title (en)
TUBULAR HEAT EXCHANGER

Publication
EP 0117829 B2 19930428 (FR)

Application
EP 84440006 A 19840223

Priority
FR 8303202 A 19830224

Abstract (en)
[origin: US4790371A] A tube-type heat exchanger comprises a plurality of tubes (1) all of which are of the same length, wound in the form of concentric cylindrical coils that touch each other, the pitch of the coils being different and the various coils being either wound in the same direction, or wound in alternately opposite directions. Each coil is comprised by one or more tubes bent to the same radius, the number of tubes in each coil increasing as the diameter of the coil.

IPC 1-7
F28D 7/02

IPC 8 full level
F28D 7/02 (2006.01); **F25B 39/00** (2006.01)

CPC (source: EP US)
F28D 7/024 (2013.01 - EP US); **Y10S 165/441** (2013.01 - EP US)

Citation (opposition)
Opponent :

- DE 2736489 A1 19790222 - LINDE AG
- FR 1523810 A 19680503 - RICHMOND ENGINEERING COMPANY
- FR 1321766 A 19630322 - SULZER AG
- FR 1523810 A 19680503 - RICHMOND ENGINEERING COMPANY

Cited by
CN113021705A; CN103438667A; WO9010836A1; WO9010835A1

Designated contracting state (EPC)
AT BE CH DE GB IT LI LU NL SE

DOCDB simple family (publication)
EP 0117829 A1 19840905; EP 0117829 B1 19880107; EP 0117829 B2 19930428; AT E31811 T1 19880115; DE 3468521 D1 19880211; FR 2541761 A1 19840831; FR 2541761 B1 19890210; US 4790371 A 19881213

DOCDB simple family (application)
EP 84440006 A 19840223; AT 84440006 T 19840223; DE 3468521 T 19840223; FR 8303202 A 19830224; US 51506983 A 19830719