

Title (en)

FLAT TUBE HEAT EXCHANGER WITH MORE THAN TWO FLOWS AND A DEFLECTING BOTTOM FOR MOTOR VEHICLES, AND PROCESS FOR MANUFACTURING THE SAME

Title (de)

MEHR ALS ZWEIFLUTIGER FLACHROHRWÄRMETAUSCHER FÜR KRAFTFAHRZEUGE MIT UMLENKBODEN SOWIE HERSTELLUNGSVERFAHREN

Title (fr)

ECHANGEUR DE CHALEUR A TUBES APLATIS AVEC DEUX FLUX OU DAVANTAGE ET UN FOND DE DEVIATION POUR VEHICULES A MOTEUR, AINSI QUE SON PROCEDE DE FABRICATION

Publication

EP 0912869 B1 20021120 (DE)

Application

EP 98925532 A 19980505

Priority

- DE 19719256 A 19970507
- EP 9802637 W 19980505

Abstract (en)

[origin: DE19719256A1] A flat tube heat exchanger for motor vehicles has two or more flows and a deflecting bottom for deflecting adjacent flows (12) of the flat tubes. According to the invention, the deflecting bottom is subdivided into deflecting cups (20) individually associated to each flat tube (2) and interconnected only via their connection to their corresponding flat tubes (2). Also disclosed is a process for manufacturing such a flat tube heat exchanger by drawing, straightening and cutting flat tubes into sections from a coil, mechanically pre-assembling the flat tube heat exchanger from its component parts, including the flat tubes, and welding. The deflecting cups (20) are mechanically pre-assembled together with the flat tubes, after they are cut into sections and before the flat tube heat exchanger is pre-assembled together with the flat tubes.

IPC 1-7

F28F 9/26; **F28D 1/053**

IPC 8 full level

F28D 1/053 (2006.01); **F28F 9/26** (2006.01)

CPC (source: EP US)

F28D 1/05391 (2013.01 - EP US); **F28F 9/262** (2013.01 - EP US)

Cited by

EP1299681A4; WO0201132A2

Designated contracting state (EPC)

FR

DOCDB simple family (publication)

DE 19719256 A1 19981112; **DE 19719256 B4 20050818**; BR 9804890 A 19990831; CN 1228158 A 19990908; EP 0912869 A1 19990506; EP 0912869 B1 20021120; US 6315037 B1 20011113; WO 9850750 A1 19981112

DOCDB simple family (application)

DE 19719256 A 19970507; BR 9804890 A 19980505; CN 98800599 A 19980505; EP 9802637 W 19980505; EP 98925532 A 19980505; US 21445799 A 19990105