

Title (en)

HEAT EXCHANGER AND METHOD OF MANUFACTURING SAME

Title (de)

WÄRMETAUSCHER UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)

ECHANGEUR DE CHALEUR ET SON PROCEDE DE FABRICATION

Publication

EP 0866301 A1 19980923 (EN)

Application

EP 97942272 A 19971007

Priority

- JP 9703589 W 19971007
- JP 26728796 A 19961008

Abstract (en)

A heat exchanger (1) formed by laminating tube elements (2) in parallel manner with fins (3) therebetween, the tube elements being formed by folding a single plate or by overlapping two plates and formed integral therein with beads (21), which compartment an interior of the tube element into a plurality of flow passages (24), an intermediate portion of the tube elements having a greater thickness (b) before such lamination than a thickness (a) of an intermediate portion on a tube surface of the tube elements after such lamination. A method of manufacturing a heat exchanger, according to the invention, comprises beforehand forming an intermediate portion of the tube elements (2) prior to lamination into a configuration, in which it expands toward the fins, then laminating these tube elements one upon another with the fins therebetween to compress the tube elements to form an assembly of a heat exchanger, applying flux on the assembly, and feeding the assembly into a furnace to subject it to integral brazing by heat treatment. Accordingly, the expanded portion is suitably compressed by pressure welding of the fins at the time of lamination of the tube elements such that top portions of the tube elements or the beads and inner wall portions of the tube elements are corrected to permit brazing.

<IMAGE>

IPC 1-7

F28F 1/02

IPC 8 full level

F28F 1/02 (2006.01); **F28D 1/03** (2006.01); **F28D 1/053** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP KR)

F28D 1/0391 (2013.01 - EP); **F28D 1/05375** (2013.01 - EP); **F28F 1/022** (2013.01 - KR); **F28F 3/042** (2013.01 - EP KR); **F28D 1/0391** (2013.01 - KR); **F28D 1/05375** (2013.01 - KR)

Cited by

CN102554574A; EP2651549B1; EP1058070A2

Designated contracting state (EPC)

DE ES GB

DOCDB simple family (publication)

WO 9815794 A1 19980416; EP 0866301 A1 19980923; EP 0866301 A4 19991006; JP H10111091 A 19980428; KR 19990071870 A 19990927

DOCDB simple family (application)

JP 9703589 W 19971007; EP 97942272 A 19971007; JP 26728796 A 19961008; KR 19980704154 A 19980602