



(11) **EP 1 610 080 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 13.12.2006 Bulletin 2006/50

(51) Int Cl.: F28D 1/03 (2006.01)

(43) Date of publication A2: **28.12.2005 Bulletin 2005/52**

(21) Application number: 05253669.5

(22) Date of filing: 14.06.2005

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR Designated Extension States: AL BA HR LV MK YU

(30) Priority: 22.06.2004 JP 2004183613

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- (54) Stacking-type, multi-flow, heat exchangers and methods for manufacturing such heat exhangers

(57) A stacking-type, multi-flow, heat exchanger (1) includes heat transfer tubes (2) and outer fins (3) stacked alternatively. Each heat transfer tube (2) is formed by connecting a pair of tube plates (30), and each heat transfer tube includes a raised portion (45,46) fixing the pair of tube plates (30) to each other. The raised portions (45,46) are formed by elongating or raising a portion of the pair of tube plates (30) substantially simultaneously at a position at which a pair of holes (41), each of which

is formed through one tube plate (30) beforehand, are aligned. Complicated steps, such as inserting a raised portion into a hole, are not necessary. The number of types of tube plates (30) also may be reduced. Moreover, the efficiency of assembling a heat transfer tube when fixing a pair of tube plates to each other may be significantly increased.



EUROPEAN SEARCH REPORT

Application Number EP 05 25 3669

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