

Title (en)  
FLAT TUBE FOR HEAT EXCHANGER, HEAT EXCHANGER USING THE FLAT TUBE, AND METHOD OF MOLDING THE FLAT TUBE FOR THE HEAT EXCHANGER

Title (de)  
FLACHROHR FÜR WÄRMETAUSCHER, DAS FLACHROHR VERWENDENDER WÄRMETAUSCHER UND VERFAHREN ZUM FORMEN DES FLACHROHRS FÜR DEN WÄRMETAUSCHER

Title (fr)  
TUYAU PLAT POUR ECHANGEUR DE CHALEUR, ECHANGEUR DE CHALEUR AYANT RECOURS A CE TUYAU PLAT, ET SON PROCEDE DE MOULAGE

Publication  
**EP 1710525 A4 20071121 (EN)**

Application  
**EP 04821200 A 20041202**

Priority  
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Abstract (en)  
[origin: EP1710525A1] The present invention provides a flat tube to be used in a heat exchanger that allows the heat exchanger to be provided as a compact unit and can be used as a universal part. The present invention also provides a heat exchanger that includes such flat tubes and a method for manufacturing the flat tubes. In flat tubes 5 and 6 each formed in the shape of a flat tube with two open ends and a fluid passage formed therein and having twisted portions near the open end portions 13 and 14 and open end portions 13 and 14 inserted at tube insertion holes 7 or 8 and 12 ranging along the central lines of a header pipe 2 or 3 and a header pipe 4, the open end portions 13 and 14 of the flat tube 5 (6) are offset relative to the central line of the flat tube extending along the length thereof to a specific extent so as to align the open end portion 13 (14) with a side edge of the flat tube 5 (6). This structure allows the heat exchanger to be provided as a compact unit and the flat tubes can be offered as universal parts.

IPC 8 full level  
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CPC (source: EP)  
**F28D 1/05391** (2013.01); **F28F 1/025** (2013.01)

Citation (search report)  
• [X] EP 0845648 A2 19980603 - BEHR GMBH & CO [DE]  
• [X] DE 19833845 A1 20000203 - BEHR GMBH & CO [DE]  
• [A] WO 03098142 A1 20031127 - BEHR GMBH & CO [DE], et al  
• [A] JP S59125230 A 19840719 - SHOWA ALUMINIUM CO LTD  
• See references of WO 2005071340A1

Cited by  
CN107504836A; CN102062549A; GB2457935A; GB2457935B; DE102022200916A1

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