(54) Title: FLAT TUBE FOR HEAT EXCHANGER

(57) Abstract: A number of flat tubes, flat tube heat exchangers, and methods of manufacturing both are described and illustrated. The flat tubes can be constructed of one, two, or more pieces of sheet material. A profiled insert integral with the flat tube or constructed from another sheet of material can be used to define multiple flow channels through the flat tube. The flat tubes can be constructed of relatively thin material, and can be reinforced with folds of the flat tube material and/or of an insert in areas subject to higher pressure and thermal stresses. Also, the relatively thin flat tube material can have a corrosion layer enabling the material to resist failure due to corrosion. Heat exchangers having such flat tubes connected to collection tubes are also disclosed, as are manners in which such tubes can be provided with fins.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: F28F 1/40 (2006.01)

USPC: 165/1 72, 177;29/890.049,890.05
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S.: 165/1 72, 177;29/890.049,890.05

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 3,053,511 A (GODFREY) 11 September 1962 (11.09.1962), figure 2.</td>
<td>1-5-8</td>
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<td>X</td>
<td>US 6,192,977 A (DEY et al) 28 February 2001 (28.02.2001), figures 1 and 2.</td>
<td>1-6</td>
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<td></td>
<td>column 7, line 36.</td>
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<td>Y</td>
<td>US 6,475,301 B1 (GRAB et al) 05 November 2002 (05.11.2002), column 6, lines 33-46.</td>
<td>19</td>
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</table>

See patent family annex.

Date of the actual completion of the international search

Date of mailing of the international search report
20 AUG 2008

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