

Title (en)  
END PLATE FOR A HEAT EXCHANGER WITH PIPES AND LEADERS

Publication  
**EP 0114554 A3 19840822 (FR)**

Application  
**EP 83402448 A 19831216**

Priority  
FR 8221561 A 19821222

Abstract (en)  
[origin: US4582127A] The tube end plate for a heat exchanger having tubes engaged into collars of the tube end plate which is covered by a water box is provided with a peripheral groove cooperating with a lower portion of the water box to which it is rigidly connected for forming therewith a hollow beam. There is provided a bottom portion of tube end plate in which are made tube passages defined by collars to which are brazed the tubes and between which are provided transverse slots extending transversely up to an inner wall defining the peripheral groove.

IPC 1-7  
**F28F 9/02**

IPC 8 full level  
**F28F 9/02** (2006.01); **F28F 9/18** (2006.01)

CPC (source: EP US)  
**F28F 9/0226** (2013.01 - EP US); **F28F 9/18** (2013.01 - EP US); **F28F 2225/08** (2013.01 - EP US); **Y10S 165/057** (2013.01 - EP US)

Citation (search report)

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- EP 0022235 A2 19810114 - COMIND SPA [IT]
- FR 2484071 A1 19811211 - VALEO [FR]
- FR 2254771 A1 19750711 - CHAUSSON USINES SA [FR]
- FR 2250973 A1 19750606 - CHAUSSON USINES SA [FR]

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Designated contracting state (EPC)  
AT BE CH DE GB IT LI LU NL SE

DOCDB simple family (publication)  
**US 4582127 A 19860415**; AT E18304 T1 19860315; BR 8306995 A 19840731; DD 215625 A5 19841114; DE 114554 T1 19850307; DE 3362361 D1 19860403; EP 0114554 A2 19840801; EP 0114554 A3 19840822; EP 0114554 B1 19860226; ES 276332 U 19840716; ES 276332 Y 19850201; FR 2538526 A1 19840629; FR 2538526 B1 19861219; PL 245245 A1 19840827

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**US 56222083 A 19831216**; AT 83402448 T 19831216; BR 8306995 A 19831220; DD 25823583 A 19831220; DE 3362361 T 19831216; DE 83402448 T 19831216; EP 83402448 A 19831216; ES 276332 U 19831214; FR 8221561 A 19821222; PL 24524583 A 19831221