

Title (en)  
Heat exchanger

Title (de)  
Wärmeübertrager

Title (fr)  
Echangeur de chaleur

Publication  
**EP 0729001 B1 19990901 (DE)**

Application  
**EP 96102422 A 19960217**

Priority  
DE 19505746 A 19950220

Abstract (en)  
[origin: DE19601579A1] A pressure resistant outer jacket contains straight, ribbed or laminated tubes exposed to transverse flow and intersecting counterflow of heat exchange streams. A centre tube (6) is surrounded by concentric cylindrical jackets (2) forming annular ducts (1), with the tube and cylindrical jackets interconnected by one or more partitions. The communication of the gas/vapour vol. flow between the centre tube and the inner annular duct, and between all annular ducts and the header (7) takes place via apertures. In the annular ducts are fitted tubes coupled via end chambers (11,12) to deflection chambers (13) at the heat exchanger front sides.

IPC 1-7  
**F28D 9/04**; **F28F 9/22**

IPC 8 full level  
**F28D 7/16** (2006.01); **F28D 9/04** (2006.01); **F28F 9/22** (2006.01)

CPC (source: EP US)  
**F28D 7/1669** (2013.01 - EP US); **F28D 9/04** (2013.01 - EP US); **F28F 9/22** (2013.01 - EP US); **F28F 2009/224** (2013.01 - EP US);  
**Y10S 165/406** (2013.01 - EP US)

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**DE 19601579 A 19960118**; EP 96102422 A 19960217; US 60321396 A 19960220