

Title (en)

PARALLEL-FLOW EVAPORATORS WITH LIQUID TRAP FOR PROVIDING BETTER FLOW DISTRIBUTION

Title (de)

PARALLELSTROMVERDAMPFER MIT FLÜSSIGKEITSFALLE ZUR BEREITSTELLUNG EINER BESSEREN STRÖMUNGSVERTEILUNG

Title (fr)

EVAPORATEURS A FLUX PARALLELE POURVUS D'UN PIEGE A LIQUIDES POUR UNE MEILLEURE DISTRIBUTION DE FLUX

Publication

EP 1883771 A4 20111221 (EN)

Application

EP 05753677 A 20050524

Priority

US 2005018349 W 20050524

Abstract (en)

[origin: WO2006127001A2] A parallel-flow evaporator has a liquid trap for regulating velocity of refrigerant delivered to an evaporator from an expansion device. In its simplest configuration, the liquid trap is a u-shaped pipe positioned vertically and connected to an inlet manifold of the evaporator. By providing a liquid trap, a small amount of liquid refrigerant separates from the vapor phase at certain conditions. This separated liquid will tend to collect in the trap, and reduce a flow cross-sectional area of the line leading to the inlet manifold of the evaporator. As this cross-sectional area decreases, the velocity of the refrigerant passing through the line will increase. In this sense, as a small amount of liquid phase separates out, it will ensure that the velocity of the remaining refrigerant will increase such that further separation will be significantly reduced or entirely avoided. As a result, homogeneous refrigerant flow is provided to the evaporator, resulting in its performance enhancement and system reliability improvement.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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- [X1] EP 0729002 A2 19960828 - MITSUBISHI ELECTRIC CORP [JP]
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DOCDB simple family (publication)

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DOCDB simple family (application)

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