

Title (en)
REFRIGERANT DISTRIBUTION IMPROVEMENT IN PARALLEL FLOW HEAT EXCHANGER MANIFOLDS

Title (de)
KÄLTEMITTELVERTEILUNGSVERBESSERUNG IN PARALLELSTROMWÄRMETAUSCHERVERTEILERN

Title (fr)
PERFECTIONNEMENT DE LA DISTRIBUTION DE RÉFRIGÉRANT DANS DES COLLECTEURS D'ÉCHANGEURS DE CHALEUR À ÉCOULEMENTS PARALLÈLES

Publication
EP 2097701 B1 20131120 (EN)

Application
EP 06839399 A 20061215

Priority
US 2006047950 W 20061215

Abstract (en)
[origin: WO2008073108A1] A method and apparatus are presented to ensure adequate distribution of a two-phase refrigerant flowing through a plurality of heat transfer tubes of a parallel flow heat exchanger in a generally parallel manner. In several embodiments of this invention, predominantly single-phase refrigerant (liquid for condensers and vapor for evaporators) is tapped and delivered downstream to a location where a predominantly single-phase refrigerant phase is already present, bypassing at least some of the heat transfer tubes. In this manner, the remaining single-phase refrigerant (vapor for condensers and liquid for evaporators) flowing through the heat exchanger core is uniformly distributed amongst a plurality of heat transfer tubes in the next downstream pass.

IPC 8 full level
F28B 1/00 (2006.01)

CPC (source: EP US)
F25B 39/00 (2013.01 - EP US); **F25B 43/00** (2013.01 - EP US); **F28D 1/05391** (2013.01 - EP US); **F25B 2339/0444** (2013.01 - EP US); **F25B 2400/04** (2013.01 - EP US); **F28D 2021/007** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2008073108 A1 20080619; CN 101563577 A 20091021; CN 101563577 B 20120829; EP 2097701 A1 20090909; EP 2097701 A4 20110511; EP 2097701 B1 20131120; ES 2440241 T3 20140128; HK 1137803 A1 20100806; US 2010095688 A1 20100422

DOCDB simple family (application)
US 2006047950 W 20061215; CN 200680056650 A 20061215; EP 06839399 A 20061215; ES 06839399 T 20061215; HK 10103754 A 20100419; US 44386009 A 20090401