

Title (en)

LOOP TYPE THERMO SIPHON, STIRLING COOLING CHAMBER, AND COOLING APPARATUS

Title (de)

THERMOSIPHON-, STIRLING-KÜHLKAMMER UND KÜHLVORRICHTUNG MIT GESCHLOSSENEM KREISLAUF

Title (fr)

THERMOSIPHON DU TYPE BOUCLE, CHAMBRE DE REFROIDISSEMENT A CYCLE STIRLING ET APPAREIL DE REFROIDISSEMENT

Publication

EP 1669710 A1 20060614 (EN)

Application

EP 04771575 A 20040812

Priority

- JP 2004011600 W 20040812
- JP 2003309708 A 20030902
- JP 2004020679 A 20040129

Abstract (en)

A loop thermosyphon (100A) includes a closed circuit configured of an evaporator (110), a condenser (130A), a feed pipe (120) and a return pipe (140), and the evaporator (130A) is an assembly including a header pipe (131) associated with the feed pipe, a header pipe (132) associated with the return pipe, and a plurality of aligned pipes. Each of the aligned pipes is a portion condensing a working fluid evaporated and is a serpentine tube defined by a linear portion forming a plurality of stages in vertically parallel layers, and a curved portion connecting such linear portions together. The condenser (130A) in the form of an assembly is entirely inclined relative to a bottom surface (301) of a casing (300) mounting the loop thermosyphon (100A) such that the serpentine tube's linear portions have a bottommost linear portion inclined in a direction allowing the bottommost linear portion to be closer to the bottom surface (301) of the casing (300) as the bottommost linear portion approaches the header pipe (131) associated with the return pipe. The loop thermosyphon's defective operation attributed to disposition can be reduced.

IPC 1-7

F28D 15/02; **F28D 1/047**; **F25D 11/00**

IPC 8 full level

F25B 25/00 (2006.01); **F28D 15/02** (2006.01); **F25B 9/14** (2006.01); **F25B 23/00** (2006.01); **F25D 11/00** (2006.01)

CPC (source: EP KR US)

F25B 25/00 (2013.01 - EP US); **F25D 11/00** (2013.01 - KR); **F28D 1/047** (2013.01 - KR); **F28D 15/02** (2013.01 - KR); **F28D 15/0266** (2013.01 - EP US); **F25B 9/14** (2013.01 - EP US); **F25B 23/006** (2013.01 - EP US); **F25B 2500/01** (2013.01 - EP US); **F25D 11/00** (2013.01 - EP US); **F25D 2317/0682** (2013.01 - EP US); **F28D 2015/0216** (2013.01 - EP US)

Citation (search report)

See references of WO 2005024331A1

Cited by

AU2007299586B2; US10349561B2; WO2008034185A1; US10448543B2; US11109517B2; US9552025B2; US9961803B2; US10462935B2; US10542641B2; US11419246B2; US11622474B2

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