

Title (en)

EVAPORATION DEVICE AND CONTROL METHOD THEREFOR, AND REFRIGERATED DISPLAY CABINET

Title (de)

VERDAMPFUNGSVORRICHTUNG UND STEUERUNGSVERFAHREN DAFÜR SOWIE GEKÜHLTER SCHAUKASTEN

Title (fr)

DISPOSITIF D'ÉVAPORATION ET SON PROCÉDÉ DE COMMANDE, ET CABINE D'AFFICHAGE RÉFRIGÉRÉE

Publication

EP 4227608 A4 20240605 (EN)

Application

EP 21879256 A 20210929

Priority

- CN 202011084822 A 20201012
- CN 2021121517 W 20210929

Abstract (en)

[origin: EP4227608A1] The present disclosure relates to an evaporator, a control method thereof, and a refrigeration display cabinet. The evaporator includes a heat exchange body (1). The heat exchange body (1) includes a dehumidification area (A) and an anti-frost cooling area (B) sequentially arranged along a first direction. The dehumidification area (A) is located at an air inflow side in the first direction. The heat exchange body (1) includes a heat exchange channel for refrigerant to flow. The heat exchange channel includes a plurality of first channel sections and a plurality of second channel sections. The plurality of first channel sections are arranged at intervals along the first direction, and extend along a second direction perpendicular to the first direction. The same side ends of adjacent first channel sections in the heat exchange channel are in communication with each other through the second channel sections. The number density of the first channel sections in the anti-frost cooling area (B) is less than the number density of the first channel sections in the dehumidification area (A).

IPC 8 full level

F25B 39/02 (2006.01); **A47F 3/04** (2006.01); **F25B 49/02** (2006.01); **F28D 1/047** (2006.01); **F28F 19/00** (2006.01); **F28F 19/02** (2006.01)

CPC (source: CN EP KR)

A47F 3/0447 (2013.01 - EP KR); **F25B 39/02** (2013.01 - CN EP KR); **F25B 49/02** (2013.01 - EP KR); **F25D 11/00** (2013.01 - CN);
F25D 17/042 (2013.01 - CN); **F25D 17/06** (2013.01 - CN); **F25D 21/04** (2013.01 - CN); **F25D 25/02** (2013.01 - CN); **F28D 1/0477** (2013.01 - EP);
F28D 1/05391 (2013.01 - EP); **F28F 19/006** (2013.01 - EP KR); **F28F 19/02** (2013.01 - EP KR); **F28F 27/00** (2013.01 - KR);
F25B 2600/2513 (2013.01 - EP); **F25B 2700/21163** (2013.01 - EP); **F25B 2700/21174** (2013.01 - KR); **F25B 2700/21175** (2013.01 - EP KR);
F25D 2317/0411 (2013.01 - CN); **F28D 2021/0071** (2013.01 - EP); **F28F 2210/04** (2013.01 - EP); **F28F 2210/08** (2013.01 - EP);
F28F 2245/04 (2013.01 - EP KR)

Citation (search report)

- [XP] CN 213119670 U 20210504 - GREE ELECTRIC APPLIANCES INC ZHUHAI
- [X] FR 791366 A 19351210 - MODINE MFG CO
- [XAY] CN 109737676 A 20190510 - UNIV XI AN JIAOTONG
- [Y] CN 111449457 A 20200728 - GREE ELECTRIC APPLIANCES INC ZHUHAI
- [I] DE 102011104853 A1 20121227 - GM GLOBAL TECH OPERATIONS INC [US]
- [I] US 2004168456 A1 20040902 - CHIANG ROBERT HONG LEUNG [CN], et al
- [I] DE 102017120045 A1 20190228 - VOLKSWAGEN AG [DE]
- [I] JP 2001065801 A 20010316 - HITACHI LTD, et al
- [A] US 2017292770 A1 20171012 - FOWLER TOBEY D [US], et al
- [A] EP 2445377 B1 20191113 - CARRIER CORP [US]
- See also references of WO 2022078210A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 4227608 A1 20230816; EP 4227608 A4 20240605; CN 112113379 A 20201222; JP 2023538726 A 20230911; KR 20230035103 A 20230310;
WO 2022078210 A1 20220421

DOCDB simple family (application)

EP 21879256 A 20210929; CN 202011084822 A 20201012; CN 2021121517 W 20210929; JP 2023503212 A 20210929;
KR 20237004242 A 20210929