

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(10) 国际公布号
WO 2023/088066 A1

(43) 国际公布日
2023 年 5 月 25 日 (25.05.2023)

(51) 国际专利分类号:
F24F 5/00 (2006.01) *F24F 13/22* (2006.01)
F24F 11/54 (2018.01) *F24F 13/30* (2006.01)
F24F 11/64 (2018.01) *F28G 9/00* (2006.01)
F24F 11/67 (2018.01) *F24F 140/12* (2018.01)
F24F 11/84 (2018.01) *F24F 140/20* (2018.01)

(21) 国际申请号: PCT/CN2022/128154

(22) 国际申请日: 2022 年 10 月 28 日 (28.10.2022)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
202111361573.3 2021 年 11 月 17 日 (17.11.2021) CN

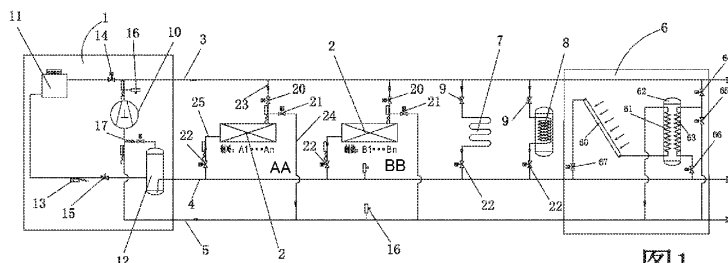
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(54) Title: MULTI-SPLIT CENTRAL AIR CONDITIONING SYSTEM FOR SIMULTANEOUS COOLING AND HEATING

(54) 发明名称: 一种同时进行制冷和制热的多联机中央空调系统



AA Cooling
BB Heating

(57) Abstract: The present invention relates to a multi-split central air conditioning system for simultaneous cooling and heating, comprising a condensation module, a plurality of indoor fan coil units, a high-pressure circulation tube, a medium-pressure circulation tube, a low-pressure circulation tube, and an evaporation module. The indoor fan coil units are connected to the high-pressure circulation tube by means of a first branch tube, to the low-pressure circulation tube by means of a second branch tube, and to the medium-pressure circulation tube by means of a third branch tube, and a solenoid valve is provided on each of the first branch tube and the second branch tube. The beneficial effects are: when heating a local area in the summer and cooling a local room in the winter, refrigerant is circulated by means of solenoid valve switching and a medium-pressure circulation tube such that the multi-split central air conditioning system has multiple working modes (independent cooling/independent heating/simultaneous partial cooling and partial heating), thereby improving the diversity of the overall operation conditions of the air conditioning system without adding a complex refrigerant switching

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(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。

(84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

本国际公布:

— 包括国际检索报告 (条约第21条(3))。

pipng. The condensation module and the evaporation module can also be used as a balancer of the system to ensure efficient and stable operation of the system.

(57) 摘要: 本发明涉及同时进行制冷和制热的多联机中央空调系统, 包括冷凝模块、多个室内风机盘管、高压流通管、中压流通管、低压流通管和蒸发模块, 室内风机盘管通过第一支管与高压流通管连接, 通过第二支管与低压流通管连接, 通过第三支管与中压流通管连接, 第一支管和第二支管上分别设置有电磁阀。其有益效果是: 夏季局部区域制热或冬季局部房间制冷时通过电磁阀切换和中压流通管实现制冷剂的流转, 使得多联机中央空调系统具备多种工作模式(单独制冷/单独制热/同时部分制冷和部分制热), 在不增添复杂的冷媒切换管路的情形下提升了空调系统的整体运行情况的多样性。冷凝模块和蒸发模块还能够作为系统的平衡器, 确保系统高效稳定的运行。