

Title (en)

METHOD AND DEVICE FOR CONTROLLING THE TEMPERATURE OF A SPACE TO BE TEMPERATURE-CONTROLLED

Title (de)

VERFAHREN UND VORRICHTUNG ZUM TEMPERIEREN EINES ZU TEMPERIERENDEN RAUMS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE RÉGULATION DE LA TEMPÉRATURE D'UN ESPACE DONT LA TEMPÉRATURE DOIT ÊTRE RÉGULÉE

Publication

EP 4314671 B1 20240529 (DE)

Application

EP 22782732 A 20220922

Priority

- DE 102021211049 A 20210930
- DE 102022201790 A 20220221
- EP 2022076419 W 20220922

Abstract (en)

[origin: WO2023052244A1] The invention relates to a device for controlling the temperature of a space (5) to be temperature-controlled, the space having a space boundary (20) that separates the space to be temperature-controlled from the surroundings (21), the device comprising: a primary heat pump circuit having an evaporator (4), a condenser (2), a compressor (1) and an expansion element (3), the primary heat pump circuit having a natural, e.g. flammable, primary working fluid, and the evaporator (4), the condenser (2), the compressor (1) and the expansion element (3) being located outside the space to be temperature-controlled; and a secondary circuit, which is thermally coupled to the evaporator (4) or to the condenser (2) via a heat exchanger (7) and is fluidically decoupled and has a temperature-control element (14), which is located in the space (5) to be temperature-controlled and is connected to the heat exchanger (7) via a line arrangement (15a, 15b) that has a secondary fluid differing from the primary working fluid, the line arrangement (15a, 15b) penetrating the space boundary (20).

IPC 8 full level

F25B 7/00 (2006.01); **F25B 39/02** (2006.01); **F25B 47/02** (2006.01); **F25B 49/02** (2006.01); **F28D 1/00** (2006.01)

CPC (source: EP)

F25B 7/00 (2013.01); **F25B 39/02** (2013.01); **F25B 47/025** (2013.01); **F25B 49/02** (2013.01); **F28D 9/005** (2013.01); **F25B 13/00** (2013.01); **F28D 1/0443** (2013.01); **F28D 2021/0068** (2013.01)

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)

WO 2023052244 A1 20230406; AU 2022357257 A1 20240411; EP 4314671 A1 20240207; EP 4314671 B1 20240529

DOCDB simple family (application)

EP 2022076419 W 20220922; AU 2022357257 A 20220922; EP 22782732 A 20220922