Title (en)
METHOD FOR CONTROLLING A THERMAL MANAGEMENT DEVICE

Title (de)
VERFAHREN ZUR STEUERUNG EINER WÄRMEVERWALTUNGSVORRICHTUNG

Title (fr)
PROCEDE DE CONTROLE D'UN DISPOSITIF DE GESTION THERMIQUE

Publication
EP 4330064 A1 20240306 (FR)

Application
EP 22727041 A 20220429

Priority
- FR 2104528 A 20210429
- EP 2022061549 W 20220429

Abstract (en)
[origin: WO2022229419A1] Control method comprising, for controlling the opening of the second electronic expansion valve (6), a step of estimating the delivery temperature Tro7 at which the refrigerant leaves the first cooler (7), said estimate of the refrigerant delivery temperature Tro7 being made using the following formula (a): (a) Tro7 = Tsat7 + eff7 x (Twi7 — Tsat7) where Tsat7 is the saturation temperature of the refrigerant at the pressure Pro7 at which said refrigerant leaves the first cooler (7), Twi7 is the temperature of the heat-transport fluid as it enters the first cooler (7), eff7 is the efficiency of said first cooler (7), said efficiency eff7 being obtained using the following formula (b): (b) eff 7 = 1 - e - NUT7 where NUT7 is the number of units of heat transfer between the refrigerant and the heat-transport fluid within the first cooler (7), said number of units of heat transfer NUT7 being obtained using the following formula (c): (c) NUT7 = (1 - (I)) x (II) where Mr7 is the flow rate of the refrigerant passing through the first cooler (7), Cpv is the heat capacity of the refrigerant in the gas phase, Gw7 is the conductance of the heat-transport fluid determined as a function of the flow rate Mw7 of heat-transport fluid passing through the first cooler (7), CCt7 is the target power of the first cooler (7), and CCp7 la is the potential power of the first cooler (7).

IPC 8 full level
B60H 1/32 (2006.01); **B60H 1/00** (2006.01); **F25B 5/02** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP)
B60H 1/00278 (2013.01); **B60H 1/32281** (2019.05); **B60H 1/323** (2013.01); **F25B 5/02** (2013.01); **F25B 49/02** (2013.01); B60H 1/0073 (2019.05); B60H 2001/00307 (2013.01); B60H 2001/3257 (2013.01); B60H 2001/3263 (2013.01); B60H 2001/3285 (2013.01); F25B 2500/19 (2013.01); F25B 2600/2513 (2013.01); F25B 2700/21151 (2013.01); F25B 2700/21152 (2013.01); F25B 2700/21163 (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

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022229419 A1 20221103; EP 4330064 A1 20240306; FR 3122486 A1 20221104; FR 3122486 B1 20230324

DOCDB simple family (application)
EP 2022061549 W 20220429; EP 22727041 A 20220429; FR 2104528 A 20210429