

Title (en)

HEAT PUMP AND METHOD FOR OPERATING A HEAT PUMP

Title (de)

WÄRMEPUMPE UND VERFAHREN ZUM BETREIBEN EINER WÄRMEPUMPE

Title (fr)

POMPE À CHALEUR ET PROCÉDÉ DE FONCTIONNEMENT D'UNE POMPE À CHALEUR

Publication

**EP 3577397 A1 20191211 (DE)**

Application

**EP 18709273 A 20180215**

Priority

- DE 102017204222 A 20170314
- EP 2018053770 W 20180215

Abstract (en)

[origin: WO2018166740A1] The invention relates to a heat pump (12, 26) comprising at least one evaporator (10), a subsequent downstream compressor (7a, 7b, 7), a subsequent downstream liquefier (8), and at least one subsequent downstream expansion device (9a, 9b, 9) for expanding the fluid, characterised in that, along the fluid circuit, there are arranged at least two expansion devices (9a, 9b) in series between the liquefier (8) and evaporator (10) and at least two compressors (7a, 7b) in series between the evaporator and liquefier, wherein a separator (30) for separating a gas phase and liquid phase is arranged between the two expansion devices for introducing steam between the compressors, and there are arranged means (34) for superheating the fluid (2) flowing from the evaporator.

IPC 8 full level

**F25B 1/10** (2006.01); **F25B 30/02** (2006.01); **F25B 40/00** (2006.01)

CPC (source: EP KR)

**F25B 1/10** (2013.01 - EP KR); **F25B 30/02** (2013.01 - EP KR); **F25B 40/00** (2013.01 - KR); **F25B 41/39** (2021.01 - EP KR); **F25B 40/00** (2013.01 - EP); **F25B 2500/28** (2013.01 - EP KR)

Citation (search report)

See references of WO 2018166740A1

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

DOCDB simple family (publication)

**WO 2018166740 A1 20180920**; CN 110418927 A 20191105; DE 102017204222 A1 20180920; EP 3577397 A1 20191211; JP 2020510185 A 20200402; KR 102355349 B1 20220126; KR 20190125434 A 20191106

DOCDB simple family (application)

**EP 2018053770 W 20180215**; CN 201880018397 A 20180215; DE 102017204222 A 20170314; EP 18709273 A 20180215; JP 2019550719 A 20180215; KR 20197029511 A 20180215