

Title (en)
VAPOR COMPRESSION REFRIGERATION CYCLE

Title (de)
DAMPFKOMPRESSIONSKÜHLKREISLAUF

Title (fr)
CYCLE DE RÉFRIGÉRATION À COMPRESSION DE VAPEUR

Publication
EP 3144600 A4 20180110 (EN)

Application
EP 14892130 A 20140515

Priority
JP 2014002558 W 20140515

Abstract (en)
[origin: EP3144600A1] A vapor compression refrigeration cycle that prevents decrease in a discharge temperature at an outlet of a compressor and improves operating efficiency in a field of warming and water heating is obtained. A vapor compression refrigeration cycle of the present invention is a vapor compression refrigeration cycle using HFO as refrigerant including: a compressor provided with an injection port for injecting circulating refrigerant; a pressure sensor and a temperature sensor, provided adjacent to the injection port, that measure pressure and a temperature; an expansion device that compresses and expands the refrigerant; and a controller that controls an opening degree of the expansion device based on the pressure and the temperature obtained by the pressure sensor and the temperature sensor, in which the controller controls the expansion device for causing a portion, of a P-H diagram related to the vapor compression refrigeration cycle, corresponding to a compression process to be positioned outside a saturation curve composed of a saturated liquid line and a saturated vapor line, to be positioned below critical pressure, and to be positioned on a high enthalpy region side of the saturated vapor line.

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CPC (source: EP)
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Citation (search report)

- [XY] JP H07120076 A 19950512 - MITSUBISHI ELECTRIC CORP
- [Y] JP 2006023002 A 20060126 - MITSUBISHI ELECTRIC CORP
- [A] US 2010192607 A1 20100805 - UNEZAKI FUMITAKE [JP], et al
- See also references of WO 2015173848A1

Cited by
CN108317772A

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DOCDB simple family (publication)
EP 3144600 A1 20170322; **EP 3144600 A4 20180110**; JP 6038402 B2 20161207; JP WO2015173848 A1 20170420; WO 2015173848 A1 20151119

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EP 14892130 A 20140515; JP 2014002558 W 20140515; JP 2016518654 A 20140515