

Title (en)

METHOD OF OPERATING A VAPOUR COMPRESSION CYCLE UNDER TRANS- OR SUPERCRITICAL CONDITIONS

Publication

EP 0424474 B1 19930804 (EN)

Application

EP 89910211 A 19890906

Priority

- NO 8900089 W 19890906
- NO 890076 A 19890109

Abstract (en)

[origin: WO9007683A1] The present invention involves the regulation of specific enthalpy at evaporator inlet by deliberate use of the pressure and/or temperature before throttling for capacity control. Capacity is controlled by varying the refrigerant enthalpy difference in the evaporator, by changing the specific enthalpy of the refrigerant before throttling. In the super-critical state this can be done by varying the pressure and temperature independently. In a preferred embodiment this modulation of specific enthalpy is done by varying the pressure before throttling. The refrigerant is cooled down as far as it is feasible by means of the available cooling medium, and the pressure regulated to give the required enthalpy. Another embodiment involves modulation of enthalpy by variation of the refrigerant temperature before throttling. This is done by controlling the heat rejection from the device.

IPC 1-7

F25B 1/00

IPC 8 full level

F25B 1/00 (2006.01); **F25B 9/00** (2006.01); **F25B 13/00** (2006.01); **F25B 40/00** (2006.01); **F25B 41/04** (2006.01); **F25B 45/00** (2006.01); **F25B 49/00** (2006.01)

IPC 8 main group level

F25B (2006.01)

CPC (source: EP KR US)

F25B 1/00 (2013.01 - KR); **F25B 9/008** (2013.01 - EP); **F25B 40/00** (2013.01 - EP); **F25B 41/20** (2021.01 - EP KR US); **F25B 45/00** (2013.01 - EP US); **F25B 2309/061** (2013.01 - EP); **F25B 2400/0411** (2013.01 - EP); **F25B 2400/0415** (2013.01 - EP); **F25B 2400/16** (2013.01 - EP); **F25B 2600/17** (2013.01 - EP); **F25B 2600/2501** (2013.01 - EP)

Cited by

FR2797036A1; US5694784A; DE102007027524A1; DE10223712C1; DE20208337U1; DE4415326C1; DE102007039195B4; DE4432272A1; US5685160A; DE102004014812B3; DE19850914A1; DE19631914A1; DE19631914C2; DE10332505B3; DE102004015297A1; DE10306394A1; US6523365B2; DE19813673A1; DE19813673B4; DE19607032B4; EP0701096A2; US6959557B2; EP1580052A1; WO2010064923A1; EP3444542A1; DE102017118425A1; DE202007011617U1; EP3444135A1; DE102017118424A1; US7096679B2; US6923011B2; US8196421B2; EP0945290A2; US6276153B1; US6564567B2

Designated contracting state (EPC)

DE FR GB IT NL SE

DOCDB simple family (publication)

WO 9007683 A1 19900712; DE 68908181 D1 19930909; DE 68908181 T2 19940414; DE 68908181 T3 19980618; DE 68908181 T4 19950614; DK 167985 B1 19940110; DK 214690 A 19901106; DK 214690 D0 19900907; EP 0424474 A1 19910502; EP 0424474 B1 19930804; EP 0424474 B2 19971119; JP H03503206 A 19910718; JP H0718602 B2 19950306; KR 0126550 B1 19980403; KR 910700437 A 19910315; NO 171810 B 19930125; NO 171810 C 19930505; NO 890076 D0 19890109; NO 903903 D0 19900907; NO 903903 L 19900907; PL 285966 A1 19910325; RU 2039914 C1 19950720; UA 27758 C2 20001016

DOCDB simple family (application)

NO 8900089 W 19890906; DE 68908181 A 19890906; DE 68908181 T 19890906; DK 214690 A 19900907; EP 89910211 A 19890906; JP 50951589 A 19890906; KR 900701990 A 19900908; NO 890076 A 19890109; NO 903903 A 19900907; PL 28596690 A 19900706; SU 4830938 A 19900706; UA 93003690 A 19890906