

Title (en)

VAPOUR COMPRESSION SYSTEM AND METHOD OF OPERATING THE SAME

Title (de)

DAMPFKOMPRESSIONSSYSTEM UND VERFAHREN ZUM BETREIBEN DESSELBEN

Title (fr)

SYSTEME DE COMPRESSION DE VAPEUR ET METHODE D'UTILISATION DE CELUI-CI

Publication

EP 0795110 B1 19990331 (EN)

Application

EP 95941207 A 19951220

Priority

- GB 9502982 W 19951220
- GB 9426207 A 19941223

Abstract (en)

[origin: WO9620378A1] A vapour compression system in which a quantity of a refrigerant circulates between at least two pressure levels in a condenser and an evaporator respectively, comprises a compressor (1) for increasing the pressure of refrigerant vapour; a condenser (5) for high pressure refrigerant vapour received from the compressor; an expansion device (13) such as a valve across which the pressure differential between the condenser and the evaporator is maintained, to control the withdrawal of liquid refrigerant from the condenser according to the volume of liquid refrigerant that is within or behind it; an evaporator (15) for liquid refrigerant received from the condenser; a receiver (21) into which refrigerant is discharged from the evaporator, with a vapour withdrawal conduit (25) through which vapour is withdrawn from the receiver for supply to the compressor, the receiver including a reservoir (23) into which liquid refrigerant discharged from the evaporator collects, to control supply of liquid refrigerant to the compressor; a liquid withdrawal conduit (27) through which liquid refrigerant is supplied from the reservoir into the vapour withdrawal conduit; and means (35) for controlling the rate of removal of liquid refrigerant from the reservoir in proportion to the amount of refrigerant that is removed from the receiver as vapour. The system can ensure that the wetness of the refrigerant discharged into the receiver from the evaporator is controlled to ensure that it is wet under normal operating conditions of the system, to optimise use of heat exchange surfaces of the condenser and the evaporator.

IPC 1-7

F25B 43/00; **F25B 1/00**

IPC 8 full level

F25B 1/00 (2006.01); **F25B 1/10** (2006.01); **F25B 5/02** (2006.01); **F25B 9/00** (2006.01); **F25B 40/00** (2006.01); **F25B 41/06** (2006.01); **F25B 43/00** (2006.01)

CPC (source: EP)

F25B 1/00 (2013.01); **F25B 1/10** (2013.01); **F25B 5/02** (2013.01); **F25B 9/006** (2013.01); **F25B 40/00** (2013.01); **F25B 41/315** (2021.01); **F25B 43/006** (2013.01); **F25B 2341/0011** (2013.01)

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE

DOCDB simple family (publication)

WO 9620378 A1 19960704; AT E178398 T1 19990415; AU 4269196 A 19960719; AU 692023 B2 19980528; BR 9510409 A 19990824; CA 2208536 A1 19960704; CN 1175304 A 19980304; DE 69508787 D1 19990506; DE 69508787 T2 19990805; DK 0795110 T3 19991018; EP 0795110 A1 19970917; EP 0795110 B1 19990331; ES 2130687 T3 19990701; GB 9426207 D0 19950222; IL 116497 A0 19960331; IL 116497 A 20000726; JP H11503814 A 19990330; MX 9704716 A 19971031

DOCDB simple family (application)

GB 9502982 W 19951220; AT 95941207 T 19951220; AU 4269196 A 19951220; BR 9510409 A 19951220; CA 2208536 A 19951220; CN 95197631 A 19951220; DE 69508787 T 19951220; DK 95941207 T 19951220; EP 95941207 A 19951220; ES 95941207 T 19951220; GB 9426207 A 19941223; IL 11649795 A 19951222; JP 52028296 A 19951220; MX 9704716 A 19951220