

Title (en)
EXPANSION VALVE CONTROL DEVICE, HEAT SOURCE MACHINE, AND EXPANSION VALVE CONTROL METHOD

Title (de)
EXPANSIONSVENTIL-STEUERVORRICHTUNG, WÄRMEQUELLENMASCHINE UND EXPANSIONSVENTIL-STEUERVERFAHREN

Title (fr)
DISPOSITIF DE COMMANDE DE DÉTENDEUR, MACHINE DE SOURCE DE CHALEUR, ET PROCÉDÉ DE COMMANDE DE DÉTENDEUR

Publication
EP 2693136 A1 20140205 (EN)

Application
EP 12764195 A 20120315

Priority

- JP 2011070604 A 20110328
- JP 2012056764 W 20120315

Abstract (en)
The purpose of the invention is to set the opening degree of an expansion valve to an appropriate opening degree, irrespective of a load on a heat source machine and external conditions. An expansion valve control device (40) controls the opening degree of an expansion valve (18) of a turbo refrigerating machine comprising: a compressor for compressing a refrigerant; a condenser for condensing the compressed refrigerant with cooling water; an evaporator for evaporating the condensed refrigerant and performing heat-exchange between the refrigerant and cold water; and an expansion valve for expanding the refrigerant in the liquid phase stored in the condenser. The expansion valve control device (40) calculates an opening degree of the expansion valve (18) on the basis of the difference between a target overheating degree and a measured overheating degree of the refrigerant taken into the turbo compressor, calculates an opening degree of the expansion valve (18) on the basis of a planned CV value, which is an estimated value of the flow rate of the refrigerant caused to pass through the expansion valve (18), and calculates an expansion valve opening degree command value from the two calculated opening degrees of the expansion valve (18).

IPC 8 full level
F25B 1/00 (2006.01)

CPC (source: EP KR US)
F25B 41/20 (2021.01 - EP KR US); **F25B 49/02** (2013.01 - US); **F25B 49/022** (2013.01 - EP KR US); **F25B 2600/2513** (2013.01 - EP KR US); **F25B 2600/2515** (2013.01 - EP KR US)

Citation (search report)
See references of WO 2012132944A1

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

DOCDB simple family (publication)
US 2013180272 A1 20130718; CN 103443563 A 20131211; EP 2693136 A1 20140205; JP 2012202672 A 20121022; KR 20130037730 A 20130416; WO 2012132944 A1 20121004

DOCDB simple family (application)
US 201213825904 A 20120315; CN 201280002910 A 20120315; EP 12764195 A 20120315; JP 2011070604 A 20110328; JP 2012056764 W 20120315; KR 20137006282 A 20120315