

Title (en)

A method for controlling a supply of refrigerant to an evaporator based on temperature measurements

Title (de)

Verfahren zur Steuerung einer K hlmittelezuf hrung zu einem Verdampfer auf Basis von Temperaturmessungen

Title (fr)

Proc d  pour commander un approvisionnement de r frig rant vers un  vaporateur bas  sur des mesures de temp rature

Publication

**EP 2894421 A1 20150715 (EN)**

Application

**EP 14151107 A 20140114**

Priority

EP 14151107 A 20140114

Abstract (en)

A method for controlling a supply of refrigerant to an evaporator (2) of a vapour compression system (1), such as a refrigeration system, an air condition system or a heat pump. The opening degree of the expansion valve (3) is controlled on the basis of an air temperature, T air , of air flowing across the evaporator (2), and in order to reach a reference air temperature, T air, ref . The opening degree is set to the calculated opening degree, overlaid with a perturbation signal. A temperature signal, S 2 , representing a temperature of refrigerant leaving the evaporator (2) is monitored and analysed. In the case that the analysis reveals that a dry zone of the evaporator (2) is approaching a minimum length, the opening degree of the expansion valve (3) is decreased. This provides a safety mechanism which ensures that liquid refrigerant is prevented from passing through the evaporator (2).

IPC 8 full level

**F25B 49/02** (2006.01)

CPC (source: EP RU US)

**F25B 49/02** (2013.01 - EP RU US); **F25B 2500/19** (2013.01 - EP US); **F25B 2500/28** (2013.01 - US); **F25B 2600/21** (2013.01 - EP US); **F25B 2600/2513** (2013.01 - EP US); **F25B 2700/21171** (2013.01 - EP US)

Citation (applicant)

WO 2012052019 A1 20120426 - DANFOSS AS [DK], et al

Citation (search report)

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- [A] US 2011214438 A1 20110908 - LARSEN LARS FINN SLOTH [DK], et al
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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)

**EP 2894421 A1 20150715**; CN 105874289 A 20160817; CN 105874289 B 20180420; RU 2640142 C1 20171226; US 2016327322 A1 20161110; WO 2015106906 A1 20150723

DOCDB simple family (application)

**EP 14151107 A 20140114**; CN 201480072306 A 20141216; EP 2014077904 W 20141216; RU 2016125862 A 20141216; US 201415109521 A 20141216