

Title (en)  
REFRIGERATION CYCLE DEVICE AND CONTROL METHOD FOR DETERMINATION OF LEAKS IN BYPASS VALVE OF REFRIGERATION CYCLE DEVICE

Title (de)  
KÄLTEKREISLAUFVORRICHTUNG UND STEUERUNGSVERFAHREN ZUR BESTIMMUNG VON LECKS IN EINEM BYPASS-VENTIL EINER KÄLTEKREISLAUFVORRICHTUNG

Title (fr)  
DISPOSITIF À CYCLES DE RÉFRIGÉRATION ET PROCÉDÉ DE COMMANDE POUR DÉTERMINER DES FUITES DANS LA SOUPAPE DE DÉRIVATION DU DISPOSITIF À CYCLES DE RÉFRIGÉRATION

Publication  
**EP 3361190 A4 20181031 (EN)**

Application  
**EP 16885082 A 20161212**

Priority  
• JP 2016005401 A 20160114  
• JP 2016086936 W 20161212

Abstract (en)  
[origin: EP3361190A1] This refrigeration cycle device is equipped with: a bypass pipe 27 which has one end 27a that is connected to an outdoor side liquid pipe 22c between an outdoor heat exchanger 13 and indoor heat exchangers 30 and another end 27b that is connected to a suction pipe 22b of a compressor 10; a bypass valve 28 which controls the flow of a refrigerant in the bypass pipe 27; a floodback determination unit which determines the presence or absence of floodback of the refrigerant to the compressor 10; and a bypass valve leakage determination unit which determines whether or not the floodback has been caused by leaks in the bypass valve 28 on the basis of the suction superheat degree of the refrigerant obtained in the suction pipe 22b upstream of the other end 27b of the bypass pipe 27.

IPC 8 full level  
**F25B 49/02** (2006.01); **F25B 1/00** (2006.01); **F25B 31/00** (2006.01); **F25B 49/00** (2006.01)

CPC (source: EP)  
**F25B 1/00** (2013.01); **F25B 31/008** (2013.01); **F25B 49/005** (2013.01); **F25B 49/02** (2013.01); **F25B 2400/0409** (2013.01); **F25B 2500/08** (2013.01); **F25B 2500/222** (2013.01); **F25B 2600/21** (2013.01); **F25B 2600/2501** (2013.01); **F25B 2700/1931** (2013.01); **F25B 2700/1933** (2013.01); **F25B 2700/2101** (2013.01); **F25B 2700/21151** (2013.01); **F25B 2700/21152** (2013.01); **F25B 2700/21156** (2013.01)

Citation (search report)  
• [A] EP 2941604 A1 20151111 - THERMO KING CORP [US]  
• [A] WO 2011049778 A1 20110428 - CARRIER CORP [US], et al  
• [A] US 4262492 A 19810421 - MORITA KEIICHI, et al  
• See references of WO 2017122479A1

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US12072130B2

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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)  
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DOCDB simple family (publication)  
**EP 3361190 A1 20180815; EP 3361190 A4 20181031; EP 3361190 B1 20190710**; CN 108291757 A 20180717; ES 2741278 T3 20200210; JP 2017125654 A 20170720; JP 6590706 B2 20191016; WO 2017122479 A1 20170720

DOCDB simple family (application)  
**EP 16885082 A 20161212**; CN 201680065728 A 20161212; ES 16885082 T 20161212; JP 2016005401 A 20160114; JP 2016086936 W 20161212