

Title (en)

CHARGE CONTROL SYSTEM FOR TRANS-CRITICAL VAPOR CYCLE SYSTEMS

Title (de)

LADESTEUERUNGSSYSTEM FÜR TRANSKRITISCHE DAMPFZYKLUSYSTEME

Title (fr)

SYSTÈME DE COMMANDE DE CHARGE POUR SYSTÈMES DE CYCLE DE VAPEUR TRANSCRITIQUE

Publication

EP 3054238 A1 20160810 (EN)

Application

EP 16152811 A 20160126

Priority

US 201562111234 P 20150203

Abstract (en)

A cooling system (1200, 1300, 1400) includes a main refrigerant circuit (1202) that includes a compressor (1206), a heat rejection heat exchanger (1210, 1310, 1418), one of an expander (1302, 1402) and an expansion device (1212), at least one evaporator (1214, 1306, 1404, 1406) coupled to a thermal load, and a suction accumulator (1216). A charge management circuit (1204) includes a charge management receiver (1228) configured in parallel with the compressor (1206) and the heat rejection heat exchanger (1201, 1310, 1418). A controller (1218) is configured to accumulate and discharge reserve refrigerant to and from the charge management receiver (1228) to provide flexibility in system operation as refrigerant in the main refrigerant circuit (1202) operates in sub-critical, trans-critical, and super-critical modes of operation.

IPC 8 full level

F25B 40/00 (2006.01); **F25B 9/00** (2006.01); **F25B 9/06** (2006.01); **F25B 9/08** (2006.01); **F25B 41/40** (2021.01); **F25B 45/00** (2006.01)

CPC (source: CN EP)

F25B 9/008 (2013.01 - CN); **F25B 9/06** (2013.01 - EP); **F25B 40/00** (2013.01 - EP); **F25B 41/40** (2021.01 - CN); **F25B 45/00** (2013.01 - EP); **F25B 9/008** (2013.01 - EP); **F25B 2309/06** (2013.01 - EP); **F25B 2309/061** (2013.01 - CN EP); **F25B 2345/003** (2013.01 - EP)

Citation (search report)

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- [A] EP 2669606 A1 20131204 - ECOTECHNICS S P A [IT]
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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)

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