

Title (en)
TRANSPORT REFRIGERATION SYSTEM AND METHOD OF OPERATION

Title (de)
TRANSPORTKÜHLSYSTEM UND BETRIEBSVERFAHREN

Title (fr)
SYSTÈME DE RÉFRIGÉRATION DE TRANSPORT ET PROCÉDÉ DE COMMANDE

Publication
EP 2304338 A4 20140903 (EN)

Application
EP 09747456 A 20090513

Priority
• US 2009043773 W 20090513
• US 12761308 P 20080514

Abstract (en)
[origin: WO2009140372A1] A refrigerant vapor compression system using CO₂ as the working fluid and operating in a transcritical cycle, compression of the refrigerant is accomplished by use of a digital scroll compressor adapted to a variable duty cycle in a pulse width modulation manner. The compression ratio is maintained at an acceptable level by selective control of various components within the system, depending on the mode of operation.

IPC 8 full level
F25B 1/00 (2006.01); **F25B 1/04** (2006.01); **F25B 9/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)
B60H 1/3216 (2013.01 - EP US); **F25B 9/008** (2013.01 - EP US); **F25B 41/39** (2021.01 - EP); **F25B 49/02** (2013.01 - EP US); **B60H 2001/3292** (2013.01 - EP US); **F25B 31/008** (2013.01 - EP US); **F25B 41/39** (2021.01 - US); **F25B 49/022** (2013.01 - EP US); **F25B 49/027** (2013.01 - EP US); **F25B 2309/061** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2400/23** (2013.01 - EP US); **F25B 2600/025** (2013.01 - EP US); **F25B 2600/0251** (2013.01 - EP US); **F25B 2600/111** (2013.01 - EP US); **F25B 2700/19** (2013.01 - EP US); **F25B 2700/1931** (2013.01 - EP US); **F25B 2700/2104** (2013.01 - EP US); **F25B 2700/21152** (2013.01 - EP US)

Citation (search report)
• [Y] US 2005044885 A1 20050303 - PEARSON STEPHEN FORBES [GB]
• [Y] WO 0194859 A1 20011213 - SAMSUNG ELECTRONICS CO LTD [KR], et al
• [Y] WO 2006118573 A1 20061109 - CARRIER CORP [US], et al
• See references of WO 2009140372A1

Citation (examination)
WO 2008041996 A1 20080410 - CARRIER CORP [US], et al

Designated contracting state (EPC)
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 SE SI SK TR

DOCDB simple family (publication)
WO 2009140372 A1 20091119; CN 102027300 A 20110420; EP 2304338 A1 20110406; EP 2304338 A4 20140903; JP 2011521195 A 20110721; US 2011048042 A1 20110303

DOCDB simple family (application)
US 2009043773 W 20090513; CN 200980117112 A 20090513; EP 09747456 A 20090513; JP 2011509648 A 20090513; US 92261209 A 20090513