

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF DE CYCLE DE RÉFRIGÉRATION

Publication
EP 2244037 A1 20101027 (EN)

Application
EP 09713588 A 20090217

Priority
• JP 2009000613 W 20090217
• JP 2008038240 A 20080220

Abstract (en)
A refrigeration cycle apparatus (100) includes an expander-compressor unit (1) including a first compression mechanism (11) and an expansion mechanism (13), and a sub compressor (2) including a second compression mechanism (21). The first compression mechanism (11) is connected in parallel with the second compression mechanism (21) in a refrigerant circuit (30). The refrigeration cycle apparatus (100) further includes a bypass passage (6) bypassing the expansion mechanism (13). A first flow control valve (61), a gas-liquid separator (62) and a second flow control valve (63) are provided sequentially to the bypass passage (6) from an upstream side. An injection passage (7) guides a gas refrigerant separated from a liquid refrigerant in the gas-liquid separator (62) to the second compression mechanism (21).

IPC 8 full level
F25B 1/00 (2006.01); **F25B 9/00** (2006.01); **F25B 9/06** (2006.01)

CPC (source: EP US)
F25B 9/008 (2013.01 - EP US); **F25B 9/06** (2013.01 - EP US); **F25B 41/39** (2021.01 - EP); **F25B 1/10** (2013.01 - EP US); **F25B 41/39** (2021.01 - US); **F25B 2309/061** (2013.01 - EP US); **F25B 2339/047** (2013.01 - EP US); **F25B 2400/0411** (2013.01 - EP US); **F25B 2400/075** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2600/17** (2013.01 - EP US); **F25B 2600/2509** (2013.01 - EP US); **F25B 2700/2106** (2013.01 - EP US); **F25B 2700/2109** (2013.01 - EP US); **F25B 2700/21152** (2013.01 - EP US); **F25B 2700/21161** (2013.01 - EP US)

Cited by
US2012111050A1; US9234663B2; US9097444B2; EP2896912A1; WO2020025135A1; WO2020025770A3

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

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2244037 A1 20101027; **EP 2244037 A4 20120425**; JP 5064517 B2 20121031; JP WO2009104375 A1 20110616; US 2010326107 A1 20101230; WO 2009104375 A1 20090827

DOCDB simple family (application)
EP 09713588 A 20090217; JP 2009000613 W 20090217; JP 2009554213 A 20090217; US 91802209 A 20090217