

Title (en)
HEAT PUMP SYSTEM

Title (de)
WÄRMEPUMPENSYSTEM

Title (fr)
SYSTÈME DE POMPE À CHALEUR

Publication
EP 2320158 A4 20140507 (EN)

Application
EP 09802833 A 20090708

Priority
• JP 2009062469 W 20090708
• US 8406508 P 20080728

Abstract (en)
[origin: EP2320158A1] Disclosed is a heat pump system comprising a heat source cycle (A) and an NH₃ secondary coolant cycle (B). The heat cycle (A) includes a compressor (1), a condenser (2), an expansion means (3) and a cascade condenser (endothermic unit) (4), and employs an NH₃ coolant as a heat source. The NH₃ secondary coolant cycle (B) is connected to the heat source cycle (A), and cools an object load with an NH₃ secondary coolant, which is heat-absorbed by the cascade condenser (4) of the heat source cycle (A) so that the coolant is condensed. The NH₃ secondary coolant cycle (B) includes the cascade condenser (4), which is heat-absorbed by the cascade condenser (4) of the heat source cycle (A) so that the NH₃ secondary coolant is condensed, an evaporator (8) for cooling the object coolant with the NH₃ secondary coolant condensed in the cascade condenser (4), a head difference unit (H) and a circulating pump (6) arranged between the cascade condenser (4) and the evaporator (8) so as to circulate the NH₃ secondary coolant, a bypass conduit for bypassing the circulating pump (6), and a flow control valve (5) arranged in the bypass conduit.

IPC 8 full level
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CPC (source: EP)
F25B 9/002 (2013.01); **F25B 25/005** (2013.01); **F25B 2400/04** (2013.01); **F25B 2500/01** (2013.01)

Citation (search report)
• [Y] JP 2005030622 A 20050203 - MAEKAWA SEISAKUSHO KK
• [Y] WO 2006038354 A1 20060413 - MAEKAWA SEISAKUSHO KK [JP], et al
• [A] JP 2006214611 A 20060817 - NISSIN KOGYO KK
• [A] JP H0539963 A 19930219 - SANKI ENG CO LTD
• See references of WO 2010013590A1

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 SM TR

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