

Title (en)
HEAT PUMP SYSTEM

Title (de)
WÄRMEPUMPENSYSTEM

Title (fr)
SYSTÈME DE POMPE À CHALEUR

Publication
EP 2320158 A1 20110511 (EN)

Application
EP 09802833 A 20090708

Priority
• JP 2009062469 W 20090708
• US 8406508 P 20080728

Abstract (en)
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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