

Title (en)

Supercritical steam compression heat pump and hot-water supply unit

Title (de)

Überkritische Dampfkomppressionswärmepumpe und Heißwasserversorgungseinheit

Title (fr)

Pompe à chaleur à compression de vapeur supercritique et unité d'alimentation en eau chaude

Publication

**EP 2525168 A1 20121121 (EN)**

Application

**EP 12167898 A 20120514**

Priority

JP 2011111747 A 20110518

Abstract (en)

An object is to provide a supercritical steam compression heat pump whose heating capacity can be increased by enabling the operation thereof without reducing a high pressure. In a supercritical steam compression heat pump 2 in which CO<sub>2</sub> refrigerant is employed as a working medium and a refrigerant circulation circuit 18 is formed in which a compressor 9, a heat sink 11, an internal heat exchanger 14, depressurizing means 15A and 15B, evaporators 17A and 17B, and a low-pressure gas/liquid separator 26 are connected with pipes in this order, the low-pressure gas/liquid separator 26 is disposed in an intake pipe 18A that connects an outlet side of the internal heat exchanger 14 and the compressor 9.

IPC 8 full level

**F25B 9/00** (2006.01); **F25B 40/00** (2006.01); **F25B 43/00** (2006.01)

CPC (source: EP)

**F25B 9/008** (2013.01); **F25B 40/00** (2013.01); **F25B 43/006** (2013.01); **F25B 2309/061** (2013.01); **F25B 2400/13** (2013.01)

Citation (search report)

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- [X] JP 2008089268 A 20080417 - SANDEN CORP
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- [Y] EP 1632733 A2 20060308 - MATSUSHITA ELECTRIC IND CO LTD [JP]

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CN109297213A

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)

**EP 2525168 A1 20121121**; **EP 2525168 B1 20190807**; ES 2750032 T3 20200324; JP 2012241967 A 20121210

DOCDB simple family (application)

**EP 12167898 A 20120514**; ES 12167898 T 20120514; JP 2011111747 A 20110518