

Title (en)
HEAT PUMP-TYPE HEATING DEVICE

Title (de)
ERWÄRMUNGSVORRICHTUNG MIT EINER WÄRMEPUMPE

Title (fr)
DISPOSITIF DE CHAUFFAGE DU TYPE POMPE À CHALEUR

Publication
EP 2933583 A4 20160720 (EN)

Application
EP 13862867 A 20131125

Priority
• JP 2012273479 A 20121214
• JP 2013081612 W 20131125

Abstract (en)
[origin: EP2933583A1] A heat pump-type heating device includes an indoor heat exchanger (26), a low-pressure side compressor (31), a high-pressure side compressor (32), a first decompressor (36) configured to decompress the refrigerant delivered from the indoor heat exchanger (26), a gas-liquid separator (38) configured to separate the refrigerant delivered from the first decompressor (36) into a gas phase and a liquid phase, a second decompressor (37) connected to the liquid-phase side of the gas-liquid separator (38) and configured to decompress the refrigerant delivered from the gas-liquid separator (38) and deliver the decompressed refrigerant to an outdoor heat exchanger (27), an injection pipeline (51) connected to the gas-phase side of the gas-liquid separator (38) and configured to guide the refrigerant delivered from the gas-liquid separator (38) to a pipeline between the low-pressure side compressor (31) and the high-pressure side compressor (32), and a control unit (46) configured to control a decompression ratio of the refrigerant in the second decompressor (37) so as to render the refrigerant that flows into the high-pressure side compressor (32) into a superheated gas state or a saturated vapor state. Provided with such configuration, it is expected to sufficiently improve the heating ability of the heat pump-type heating device.

IPC 8 full level
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CPC (source: EP)
F25B 1/10 (2013.01); **F25B 30/02** (2013.01); **F25B 41/39** (2021.01); **F25B 2400/13** (2013.01); **F25B 2400/23** (2013.01); **F25B 2600/21** (2013.01); **F25B 2600/2513** (2013.01); **F25B 2700/2101** (2013.01); **F25B 2700/21151** (2013.01)

Citation (search report)
• [X1] EP 2325578 A2 20110525 - LG ELECTRONICS INC [KR]
• [X1] US 2012167604 A1 20120705 - YAKUMARU YUICHI [JP], et al
• [X1] US 2010175400 A1 20100715 - KASAHARA SHINICHI [JP]
• [X1] WO 2011112500 A2 20110915 - CARRIER CORP [US], et al
• See references of WO 2014091909A1

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Designated contracting state (EPC)
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