

Title (en)
HEAT-PUMP-TYPE HEATING DEVICE

Title (de)
ERWÄRMUNGSVORRICHTUNG MIT EINER WÄRMEPUMPE

Title (fr)
DISPOSITIF CHAUFFANT DE TYPE POMPE À CHALEUR

Publication
EP 2873934 A4 20160217 (EN)

Application
EP 13816457 A 20130705

Priority
• JP 2012154621 A 20120710
• JP 2013068515 W 20130705

Abstract (en)
[origin: EP2873934A1] A heat pump type heating device includes: an indoor side heat exchanger (26); an outdoor side heat exchanger (27); low-pressure side compressor (31) and high-pressure side compressor (32) sequentially compressing refrigerant sent from the outdoor side heat exchanger (27); a first decompression device (36) decompressing the refrigerant sent from the indoor side heat exchanger (26); a gas-liquid separator (38) separating the refrigerant sent from the first decompression device (36), into a gas phase and a liquid phase; a second decompression device (37) connected to a liquid phase side of the gas-liquid separator (38) and decompressing the refrigerant sent from the gas-liquid separator (38); an injection pipe path (51) connected to a gas phase side of the gas-liquid separator (38) and guiding the refrigerant sent from the gas-liquid separator (38), to between the low-pressure side compressor (31) and the high-pressure side compressor (32); and a control unit (46) controlling a decompression ratio of the refrigerant in the second decompression device (37) such that the refrigerant flowing in the injection pipe path (51) is brought into a gas-liquid two-phase state. With such a configuration, there can be provided a heat pump type heating device having a simple configuration and having sufficiently improved heating ability.

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
• [IA] JP 2009300023 A 20091224 - MITSUBISHI ELECTRIC CORP
• [IA] WO 2007094618 A2 20070823 - LG ELECTRONICS INC [KR], et al
• [I] EP 2175212 A1 20100414 - DAIKIN IND LTD [JP]
• See references of WO 2014010531A1

Cited by
CN107178925A; EP3098548A1; EP3098550A1; AU2016203435B2; US10392575B2; US9944874B2; US9835056B2; US9944875B2; US11959669B2; US11841179B2; WO2021146364A1

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