

Title (en)
DOUBLE-PIPE HEAT EXCHANGER AND AIR CONDITIONER USING SAME

Title (de)
DOPPELROHRWÄRMETAUSCHER UND KLIMAANLAGE DAMIT

Title (fr)
ÉCHANGEUR DE CHALEUR À TUYAU DOUBLE ET CLIMATISEUR L'UTILISANT

Publication
EP 2787314 A1 20141008 (EN)

Application
EP 12852894 A 20121106

Priority
• JP 2011262525 A 20111130
• JP 2012078678 W 20121106

Abstract (en)
A double-pipe heat exchanger capable of achieving a compact configuration and suppressing a liquid refrigerant contained in a gas-liquid two-phase refrigerant from flowing out from an inner pipe so as to prevent generation of a liquid-back phenomenon is provided. A double-pipe heat exchanger (31) includes an outer pipe (32) through which a high pressure liquid refrigerant flows, and an inner pipe (33) having an inlet side end (33A) into which a low pressure gas-liquid two-phase refrigerant obtained by reducing pressure of the high pressure liquid refrigerant flows, and an outlet side end (33B) connected to a suction side part of a compressor. The double-pipe heat exchanger (31) includes a plurality of vertical pipes (34A, 34B) arranged in the up and down direction, and a curve pipe (35) connecting ends of the plurality of vertical pipes (34A, 34B), the outlet side end (33B) of the inner pipe (33) is provided in an upper end of one vertical pipe (34B), and the inlet side end (33A) of the inner pipe (33) is provided in an upper end of the other vertical pipe (34A).

IPC 8 full level
F28D 7/06 (2006.01); **F25B 1/00** (2006.01); **F25B 13/00** (2006.01); **F25B 40/00** (2006.01); **F28D 7/14** (2006.01)

CPC (source: EP US)
F25B 1/005 (2013.01 - US); **F25B 40/00** (2013.01 - US); **F25B 40/02** (2013.01 - EP US); **F28D 7/10** (2013.01 - US); **F28D 7/106** (2013.01 - EP US); **F28D 7/14** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US)

Cited by
DE102015215253A1; US10658713B2

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

DOCDB simple family (publication)
EP 2787314 A1 20141008; **EP 2787314 A4 20150805**; **EP 2787314 B1 20180613**; AU 2012345060 A1 20140605; AU 2012345060 B2 20150806; BR 112014012826 A2 20170613; BR 112014012826 B1 20201215; BR 112014012826 B8 20220719; CN 103930744 A 20140716; CN 103930744 B 20160106; IN 1172KON2014 A 20151016; JP 2013113559 A 20130610; JP 5403039 B2 20140129; KR 20140106609 A 20140903; US 2014326019 A1 20141106; WO 2013080754 A1 20130606

DOCDB simple family (application)
EP 12852894 A 20121106; AU 2012345060 A 20121106; BR 112014012826 A 20121106; CN 201280055516 A 20121106; IN 1172KON2014 A 20140530; JP 2011262525 A 20111130; JP 2012078678 W 20121106; KR 20147017504 A 20121106; US 201214358527 A 20121106