

Title (en)
SCREW COMPRESSOR AND REFRIGERATION CYCLE DEVICE

Title (de)
SCHRAUBENVERDICHTER UND KÜHLZYKLUSVORRICHTUNG

Title (fr)
COMPRESSEUR À VIS ET DISPOSITIF À CYCLE FRIGORIFIQUE

Publication
EP 3505765 A4 20190814 (EN)

Application
EP 16914144 A 20160823

Priority
JP 2016074443 W 20160823

Abstract (en)
[origin: EP3505765A1] A screw compressor includes: a casing having a refrigerant liquid flow passage through which refrigerant liquid from an outside passes; a screw rotor having an outer peripheral surface with a plurality of screw grooves that form compression chambers and is arranged so as to be rotated inside the casing; and a slide valve provided between the casing and the screw rotor and configured to move slidably in a direction of a rotary shaft of the screw rotor. Further, the casing, the slide valve, or each of the casing and the slide valve has an oil injection port configured to supply oil to the plurality of screw grooves, and the slide valve has a refrigerant liquid injection flow passage configured to communicate the refrigerant liquid flow passage with any one of the plurality of screw grooves and is configured to move between a first position of allowing the refrigerant liquid injection flow passage to be communicated with one of the plurality of screw grooves from a time immediately before start of compression to a time immediately after the start of compression and a second position of allowing the refrigerant liquid injection flow passage to be brought into communication with an other one of the plurality of screw grooves which is in a suction stroke before the start of compression and being closer to the oil injection port in the direction of the rotary shaft than the first position.

IPC 8 full level
F04C 29/04 (2006.01); **F04C 18/16** (2006.01); **F04C 18/52** (2006.01); **F04C 29/00** (2006.01)

CPC (source: EP)
F04C 18/52 (2013.01); **F04C 29/0014** (2013.01); **F04C 29/042** (2013.01); **F04C 2210/26** (2013.01)

Citation (search report)
• [A] EP 2166229 A1 20100324 - DAIKIN IND LTD [JP]
• [A] EP 2410182 A1 20120125 - DAIKIN IND LTD [JP]
• [A] WO 2016046907 A1 20160331 - MITSUBISHI ELECTRIC CORP [JP] & EP 3199814 A1 20170802 - MITSUBISHI ELECTRIC CORP [JP]
• [A] WO 2015114851 A1 20150806 - MITSUBISHI ELECTRIC CORP [JP]
• See references of WO 2018037469A1

Cited by
US11333148B2

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 3505765 A1 20190703; **EP 3505765 A4 20190814**; **EP 3505765 B1 20200429**; CN 109642579 A 20190416; CN 109642579 B 20201201; WO 2018037469 A1 20180301

DOCDB simple family (application)
EP 16914144 A 20160823; CN 201680088556 A 20160823; JP 2016074443 W 20160823