

Title (en)

HERMETIC REFRIGERANT COMPRESSOR AND FREEZING/REFRIGERATING APPARATUS USING THE SAME

Title (de)

HERMETISCHER KÄLTEMITTELVERDICHTER UND DAMIT AUSGESTATTETES GEFRIER-/KÜHLGERÄT

Title (fr)

COMPRESSEUR DE RÉFRIGÉRANT HERMÉTIQUE ET APPAREIL DE CONGÉLATION/RÉFRIGÉRATION L'UTILISANT

Publication

EP 3816441 A4 20210811 (EN)

Application

EP 19826187 A 20190625

Priority

- JP 2018122489 A 20180627
- JP 2019025141 W 20190625

Abstract (en)

[origin: EP3816441A1] A hermetic refrigerant compressor (100) includes a sealed container (101) in which lubricating oil (103) having a kinematic viscosity in a range of 1 to 9 mm²/S at 40°C is stored, the lubricating oil (103) containing a sliding modifier that is either sulfur or a sulfur-containing compound. A compression element (107) includes a shaft part that is a crank shaft (108). In a case where a sliding surface of a main shaft (109) is a single sliding surface, a length of the single sliding surface in an axial direction is a single sliding length L, whereas in a case where the sliding surface is divided into a plurality of sliding surfaces, a length of one of the sliding surfaces in the axial direction, the one sliding surface having the least length in the axial direction among the plurality of sliding surfaces, is the single sliding length L, and a ratio L / D of the single sliding length L to an external diameter D of the main shaft (109) is less than or equal to 0.51. Further, when a total of the lengths of the plurality of sliding surfaces in the axial direction is a total sliding length Lt, a ratio Lt / D of the total sliding length Lt to the external diameter D may be less than or equal to 1.26.

IPC 8 full level

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CPC (source: EP US)

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F04B 39/0253 (2013.01 - US); **F04B 39/122** (2013.01 - US); **F04C 2210/26** (2013.01 - US); **F25B 1/02** (2013.01 - EP)

Citation (search report)

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- See also references of WO 2020004382A1

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

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 JP 7064562 B2 20220510; JP WO2020004382 A1 20210805; US 2021123426 A1 20210429; WO 2020004382 A1 20200102

DOCDB simple family (application)

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 JP 2020527541 A 20190625; US 201917256032 A 20190625