Title (en)

OIL RETURN CIRCUIT AND OIL RETURN METHOD FOR REFRIGERATING CYCLE

Title (de)

ÖLRÜCKFÜHRUNGSKREISLAUF UND ÖLRÜCKFÜHRUNGSVERFAHREN FÜR KÜHLKREISLAUF

Title (fr)

CIRCUIT ET PROCÉDÉ DE RETOUR D'HUILE POUR CYCLE DE RÉFRIGÉRATION

Publication

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Application

EP 16755055 A 20160113

Priority

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Abstract (en)

[origin: EP3249317A1] The purpose of the present invention is to make it possible to minimize any increase in oil temperature within a compressor and to ensure a permissible operating range and conditions comparable to those for R410A refrigerant, even when a R32 refrigerant having a high discharge gas temperature is used, as well as to minimize any increase in the oil circulation rate and the effects on the refrigerating cycle capacity and performance. The present invention is provided with a refrigerating cycle (1) equipped with a low-pressure housing-type compressor (2) and filled with R32 refrigerant, an oil separator (3) provided to the discharge circuit (13A) of the compressor, and an oil return circuit (31) for returning the oil separated by the oil separator to an oil reservoir inside the housing of the compressor. The oil return circuit is a parallel circuit comprising a direct circuit (32) for direct return of oil to the oil reservoir in the housing, and a cooling circuit (35) for return of oil having been cooled by an oil cooler (37), and is provided with an oil temperature control unit (42) for detecting at least one parameter among the discharge temperature of the refrigerant, and the oil temperature or oil viscosity within the compressor, and when the parameter exceeds a threshold value, switching the oil return circuit from the direct circuit to the cooling circuit, and returning the oil once the oil temperature is brought to a prescribed temperature or lower.

IPC 8 full level

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