

Title (en)

MULTI-STAGE COMPRESSOR AND REFRIGERATION SYSTEM EQUIPPED WITH SAME

Title (de)

MEHRSTUFIGER VERDICHTER UND KÜHLSYSTEM DAMIT

Title (fr)

COMPRESSEUR À PLUSIEURS ÉTAGES ET SYSTÈME DE RÉFRIGÉRATION ÉQUIPÉ DE CE DERNIER

Publication

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Application

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Abstract (en)

It is an object of the present invention to prevent liquid compression in a high-stage side compression mechanism of a multi-stage compressor, and to effectively cool an electric motor at all times by means of an injection refrigerant thus expanding an operable range. A multi-stage compressor (2) according to the present invention includes: a housing (11) having a sealed container shape; a low-stage side compression mechanism (13) and a high-stage side compression mechanism (14) which are installed in the housing (11); an electric motor (12) which drives the low-stage side compression mechanism (13) and the high-stage side compression mechanism (14), the electric motor (12) being installed in an intermediate pressure zone in the housing (11); an injection nozzle (37) installed into the housing (11) in a penetrating manner so as to face the electric motor (12); and a refrigerant supply part (50) which extracts a gas phase portion and a liquid phase portion of a compressed refrigerant discharged from the high-stage side compression mechanism (14), and selectively supplies the gas phase portion and the liquid phase portion to the injection nozzle (37) as an injection refrigerant.

IPC 8 full level

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