ABSTRACT

MULTISTAGE COMPRESSION REFRIGERATING MACHINE FOR SUPPLYING REFRIGERANT FROM INTERCOOLER TO COOL ROTATING MACHINE AND LUBRICATING OIL

A multistage compression refrigerating machine is disclosed, which efficiently cools a rotating machine such as an electric motor and lubricating oil by using a refrigerant and increases the amount of refrigerant to be used to provide the refrigerating capacity in the evaporator, thereby improving the refrigerating capacity. The machine comprises a condenser for supplying a condensed refrigerant to an evaporator via an intercooler: a multistage compression system for absorbing the above refrigerant, absorbing a refrigerant evaporated from the intercooler, from an intermediate position between adjacent compressors, compressing the absorbed refrigerants together, and discharging it to the condenser; a rotating-machine cooler for cooling a rotating machine for driving the multistage compression system; and a lubricating-oil cooler for cooling lubricating oil. The refrigerant extracted from the intercooler is supplied to the rotating-machine cooler and the lubricating-oil cooler, and this refrigerant is returned to the evaporator after cooling.

Figure 1