ABSTRACT OF THE DISCLOSURE

A refrigerating device has a refrigerant circuit having a compressor (1), an indoor heat exchanger (3), a main motor operated valve (EV1), and an indoor heat exchanger (5) connected in a loop, and uses, as a working medium, an R32 refrigerant or a mixed refrigerant containing R32 at at least 70 wt%. A supercooling heat exchanger (11) is disposed between the indoor heat exchanger (3) and the main motor operated valve (EV1), and the liquid side of the refrigerant circuit are connected to the gas side by by-pass pipes (33, 34) through the supercooling heat exchanger (11). A supercooling motor operated valve (EV2) is disposed at the by-pass pipe (33) upstream of the supercooling heat exchanger (11). A discharge temperature detected by a discharge temperature sensor (21) is determined by a discharge temperature determination part (10b), and based on the determination result, the opening of the supercooling motor operated valve (EV2) is controlled so as to control an amount of the refrigerant flowing through the by-pass pipes (33, 34), whereby, using the working medium containing R32, the discharge temperature of the compressor is optimized without reducing the efficiency, and the COP and reliability are improved.



162162



G00002