Abstract

REFRIGERATION SYSTEM AND METHOD FOR DETECTING QUANTITY OF REFRIGERANT OF REFRIGERATION SYSTEM

In a refrigeration device including a refrigeration circuit having a compressor and a receiver, the present invention will improve the ability of a liquid level detection circuit to accurately determine whether or not liquid refrigerant is stored up to a predetermined position of the receiver. An air conditioner (1) includes a main refrigerant circuit (10) and a liquid level detection circuit (30). The main refrigerant circuit (10) includes a compressor (21) that compresses gas refrigerant, a heat source side heat exchanger (24), a receiver that stores liquid refrigerant (26), and user side heat exchangers (52). The liquid level detection circuit (30) is arranged so as to be capable of drawing out a portion of the refrigerant in the receiver (26) from a first predetermined position ($L_1$) of the receiver (26), reducing the pressure of the refrigerant and heating it, measuring the temperature of the refrigerant, and then returning the refrigerant to the intake side of the compressor (21), in order to detect whether the liquid level in the receiver (26) is at the first predetermined position ($L_1$).



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