

ABSTRACT

Provision of a chilling system accomplishing a reduction in the amount of energy expended and in energy loss. The chilling system includes a load (H); a chilling circuit (A) for chilling or cooling the load with a refrigerant; a heat-dissipating mechanism (5) for dissipating heat of the refrigerant in the chilling circuit (A) to the outside; a refrigerant tank (8) connected to the chilling circuit (A) via a confluent valve (13); a chiller for maintaining the refrigerant stored in the refrigerant tank (8) at a predetermined temperature; a controller (12) for controlling the degree of valve opening of the confluent valve (13); and a temperature sensor (14) for detecting a temperature of the refrigerant in the chilling circuit (A). When the temperature sensor (14) detects that a temperature of the refrigerant in the chilling circuit (A) exceeds a predetermined temperature, the controller (12) opens the confluent valve (13) in order to mix the refrigerant in the refrigerant tank (8) with that in the chilling circuit (A). When the refrigerant stored in the refrigerant tank (8) is maintained at a temperature within a predetermined range, the chiller (11) stops its operation.

SELECTED FIGURE: FIG. 1