

ABSTRACT

COOLING METHOD AND COOLING SYSTEM FOR ELECTRONIC DEVICE

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Provided is a cooling method for an electronic device, including: naturally circulating a refrigerant between: evaporators (20X and 20Y) which each vaporize the refrigerant by heat exchange with exhaust hot air from a server (14), and cools the exhaust hot air; and a cooling tower (22) which is placed at a position higher than the evaporators (20X and 20Y), and liquefies the vaporized refrigerant; and valve-controlling a flow rate of a refrigerant liquid to be supplied to the evaporators (20X and 20Y) so that an air temperature after heat has been exchanged for cooling by the evaporators (20X and 20Y) becomes a temperature suited to an operating environment of the server (14), in which a condensation temperature or a condensation pressure of a refrigerant gas in the cooling tower (22) does not fluctuate even when the flow rate of the refrigerant liquid to be supplied to the evaporators (20X and 20Y) is valve-controlled. Accordingly, it is possible to stably maintain a natural circulation of a refrigerant and to prevent dew condensation from being caused on a surface of an evaporator, even when a flow rate of the refrigerant of the evaporator is valve-controlled in a cooling system having a refrigerant natural circulation system.

Figure 1