[CLAIMS]

[Claim 1]

A server room management~~ing~~ air conditioning system~~,~~ in which the air conditioning system performs an air conditioning of the server room in an all circulation mode in which outside air is not introduced but supplied air is generated by returned air and supplied to the server room~~which takes in returned air of a server room as an air conditioning control subject, and supplies, to the server room, supplied air adjusted to a supplied air temperature target value and a supplied air humidity target value~~, the server room management air conditioning system comprising:

~~a~~ first coils in which the number of the coils are determined for humidity control in response to an estimated amount of the absolute humidity in the server room in the all circulation mode, which~~that~~ adjusts the returned air of the server room to a predetermined temperature value lower than a predetermined~~the~~ supplied air temperature target value to perform~~and~~ dehumidification~~es the returned air~~;

~~a~~ second coils in which the number of the coils are determined for temperature control in response to the estimated amount of the absolute humidity in the server

room in the all circulation mode, which are~~that is~~ installed in the~~a~~ same area as ~~an area of~~ the first coils~~,~~ and which adjusts the returned air of the server room to a predetermined temperature value higher than the supplied air temperature target value such~~so~~ that the returned air takes the supplied air temperature target value and a predetermined~~the~~ supplied air humidity target value ~~can be achieved~~ when the returned air is mixed with air adjusted by the first coils; and

an air supply fan which~~that~~ mixes the returned air adjusted by the first coils and the returned air adjusted by the second coils to supply~~with each other and supplies the mixed returned air~~ as ~~the~~ supplied air to the server room.

[Claim 2]

The server room management~~ing~~ air conditioning system in which the air conditioning system performs an air conditioning of the server room in an all circulation mode in which outside air is not introduced but supplied air is generated by returned air and supplied to the server room, the server room management air conditioning system~~according to claim 1, further~~ comprising:

a plurality of cooling coils which adjust the returned air of the server room;

an air supply fan which mixes the supplied air adjusted by the plurality of cooling coils to supply as the supplied air to the server room;

a first control device which obtains an outside air temperature measurement value, an outside air humidity measurement value, a supplied air temperature measurement value, a supplied air humidity measurement value, a supplied air volume, and the value that indicates road states of servers in the server room, and based on the obtained values, determines the number of the cooling coils among the plurality of cooling coils as first coils to be used for adjusting the returned air of the server room to a predetermined temperature value lower than a predetermined supplied air temperature target value to perform dehumidification, determines the number of the cooling coils among the plurality of cooling coils as second coils to be used for adjusting the returned air of the server to a predetermined temperature value higher than the supplied air temperature target value so as to adjust the returned air of the server room to the supplied air temperature

target value and a predetermined supplied air humidity target value when the returned air is mixed with air adjusted by the first coils, and determines cooling coils to be used as the first coils and cooling coils to be used as the second coils so that the first coils are biased to a specific cooling coils~~a supplied air thermometer that measures a temperature value of the supplied air supplied to the server room by the air supply fan;~~

~~a supplied air hygrometer that measures a humidity value of the supplied air; and~~

~~a control device that individually decides control amounts for the first coil and the second coil based on the temperature value measured by the supplied air thermometer and on the humidity value measured by the supplied air hygrometer~~.

[Claim 3]

The server room management~~ing~~ air conditioning system according to claim 1 or 2, further comprising:

a second control device which turns OFF the first coils when the supplied air humidity measurement value falls down below a lower limit value of a supplied air humidity target range including the supplied air humidity

target value and turns ON the first coils when the supplied air humidity measurement value exceeds an upper limit value of the supplied air humidity target range~~wherein the control device operates the first coil when the humidity value measured by the supplied air hygrometer becomes higher than a preset threshold value~~.

[Claim 4]

The server room management~~ing~~ air conditioning system according to any one of claims 1 to 3~~2~~, further comprising:

a third control device which determines a control volume of the first coils so as to minimize a difference between the supplied air humidity measurement value and the supplied air humidity target value~~wherein, based on a difference between the humidity value measured by the supplied air hygrometer and the supplied air humidity target value, the control device decides the control amount for the first coil so that the difference can be eliminated~~.

~~[Claim 5]~~

~~The server room managing air conditioning system according to any one of claims 1 to 4,~~

~~wherein at least either of the first coil and the second coil is composed of a plurality of coils, and~~

~~the control device decides a number of the first coils and a number of the second coils among the plurality of coils based on the humidity value measured by the supplied air hygrometer, and operates the first coil and the second coil based on the decided number of first coils and the decided number of second coils.~~