CLAIMS

[Claim 1]

An elevator group control system that controls a plurality of cars comprising:

a detection unit detecting the number of users present at an elevator landing on a predetermined floor;

a number-of-persons calculation unit calculating the number of riders in cars that are stopped with opened doors on the predetermined floor and calculating the number of users who are unable to board the cars with opened doors among the users on the basis of the number of users present at the elevator landing and the number of riders in the cars;

a number-of-cars calculation unit calculating, on the basis of the number of users at the elevator landing and the number of riders in the cars that are stopped with opened doors on the predetermined floor, the number of cars to be stopped with closed doors on the predetermined floor; and

a car control unit making the cars corresponding to the number of cars calculated by the number-of-cars calculation unit stand by with closed doors on the predetermined floor and opening the doors of the cars when the number of users who are unable to board the cars is larger than maximum car rider occupancy.

[Claim 2]

The elevator group control system according to claim 1,

wherein the elevator group control system includes a storage unit storing the maximum car rider occupancy which is previously set.

[Claim 3]

The elevator group control system according to claim 1,

wherein the number of users who are unable to board the cars corresponds to a difference between the number of users present at the elevator landing and the number of persons able to board the cars that are stopped with opened doors on the predetermined floor, and

wherein the number of persons able to board corresponds to a difference between the maximum car rider occupancy and the number of riders in the cars that are stopped with opened doors on the predetermined floor.

[Claim 4]

The elevator group control system according to claim 1,

wherein the elevator group control system includes a storage unit storing the maximum car rider occupancy which is previously set, and

wherein, on the basis of the number of users at the

elevator landing, the number of riders in the cars that are stopped with opened doors on the predetermined floor, and the maximum car rider occupancy, the number-of-cars calculation unit calculates the necessary number of cars to be stopped with closed doors on the predetermined floor.

[Claim 5]

The elevator group control system according to claim 4,

wherein the number-of-cars calculation unit calculates the necessary number of cars by a quotient obtained by dividing the sum of the number of users at the elevator landing and the number of riders in the cars that are stopped with opened doors by the maximum car rider occupancy.

[Claim 6]

The elevator group control system according to claim 1,

wherein when selecting, from among the cars that are stopped with closed doors, the car to be newly stopped with an opened door, the car control unit selects the car at the position far from the entrance of the elevator landing first with respect to any cars that have already been stopped with opened doors.

[Claim 7]

The elevator group control system according to claim

1,

wherein the elevator group control system includes a display unit displaying position information at the landing of each car whose door has been opened.

[Claim 8]

The elevator group control system according to claim 1,

wherein the elevator group control system includes a stop time calculation unit setting stop time with respect to the car that is stopped with an opened door, and

wherein when one of the condition in which the elevator that is stopped with an opened door has completed the stop time and the condition in which the number of riders in the car has reached a predetermined value or more or a load value has reached a predetermined value or more is satisfied, the car control unit closes the door of the car and allows the car to leave.

[Claim 9]

The elevator group control system according to claim 8,

wherein the elevator group control system further includes a display unit,

wherein from the set stop time and the elapsed time of the elevator that is stopped with an opened door, the stop time calculation unit calculates the time remaining

until the completion of the standby mode, and

wherein from the detected number of riders in the car or the detected load value, the number-of-persons calculation unit calculates the number of persons able to board the car that is stopped with an opened door, and the display unit displays position information at the landing of the car that is stopped with an opened door, the calculated remaining time, and the number of persons able to board.

[Claim 10]

The elevator group control system according to claim 9,

wherein the elevator group control system includes an order determination unit determining, from the calculated remaining stop time of the car that is stopped with an opened door, an order in which stopping with an opened door is completed to allow the elevator to leave, and

wherein the display unit displays the departure order.