CLAIMS

[Claim 1] An elevator door monitoring device,
(a) wherein the elevator door monitoring device:
(i) is coupled via a communication line to a maintenance staff terminal carried by a maintenance staff of an elevator; and
(ii) monitors a door of the elevator;
(b) wherein the elevator door monitoring device comprises:
(i) a current detector provided on a motor that opens and closes a car door; and
(ii) an acceleration detector that is provided on the car door and detects an acceleration in a direction orthogonal to a plane of the car door;
(c) wherein, when a number of times a current detected by the current detector exceeds a threshold satisfies a predetermined condition, information prompting to change an operation of the car door is transmitted to the maintenance staff terminal;
(d) wherein, when the acceleration detected by the acceleration detector does not exceed a determination value when the current detected by the current detector has exceeded the threshold, a number of times thereof is counted for each floor; and
(e) wherein, when the number of times counted on a certain floor becomes a predetermined condition, information prompting to change an opening speed or an opening time of the door on the floor is transmitted to the maintenance staff terminal.

[Claim 2] The elevator door monitoring device according to claim 1, wherein when the number of times the threshold is exceeded during a closing operation of the car door satisfies a predetermined condition, information prompting to increase an opening time of the car door is transmitted to the maintenance staff terminal.

[Claim 3] The elevator door monitoring device according to claim 1, wherein when the number of times the threshold is exceeded during an opening operation of the car door satisfies a predetermined condition, information prompting to increase an opening speed of the car door is transmitted to the maintenance staff terminal.

[Claim 4] The elevator door monitoring device according to any one of claims 1 to 3, wherein the motor has an overload reversal function that reverses the car door to a closing direction when the threshold is exceeded during an opening operation of the car door, and reverses the car door to an opening direction when the threshold is exceeded during a closing operation of the car door.

[Claim 5] An elevator door monitoring system including an elevator door monitoring device, a maintenance staff terminal carried by a maintenance staff of an elevator, and a maintenance server,

(a) wherein the elevator door monitoring device:
    (i) is coupled via a communication line to the maintenance server; and
    (ii) monitors a door of the elevator;
(b) wherein the elevator door monitoring device comprises:
    (i) a current detector provided on a motor that opens and closes a car door; and
    (ii) an acceleration detector that is provided on the car door and detects an acceleration in a direction orthogonal to a plane of the car door;
(c) wherein, when a number of times a current detected by the current detector exceeds a threshold satisfies a predetermined condition, information prompting to change an operation of the

car door is transmitted to the maintenance staff terminal by the maintenance server;

(d) wherein, when the acceleration detected by the acceleration detector does not exceed a determination value when the current detected by the current detector has exceeded the threshold, a number of times thereof is counted for each floor; and

(e) wherein, when the number of times counted on a certain floor becomes a predetermined condition, information prompting to change an opening speed or an opening time of the door on the floor is transmitted to the maintenance staff terminal by the maintenance server.