[Claim 1]

An electronically controlled elevator whose car services a plurality of floors and equipped with a safety controller that gives a command to shut off a power supply or actuate a brake by an input from a safety switch installed inside a hoistway,

the electronically controlled elevator comprising:

a position and speed detecting device that detects a position and speed of the car; and

a database for distance between floors having floor-to-floor distances stored therein,

wherein the elevator is implemented to set a scope of fallback to perform a fallback operation that allows a service across a series of floors with the exception of a particular floor as an intermediate floor; determine with respect to the scope of fallback a speed monitoring curve that defines a limiting speed as a function of the position of the car in the scope of fallback, based on the database for distance between floors; and, if the speed of the car has exceeded the limiting speed, carry out shutting off the power supply and actuating the brake by the safety controller.

[Claim 2]

The electronically controlled elevator according to claim 1, wherein the speed monitoring curve defines the limiting speed that should become zero at a position that is at a certain distance

from the particular floor.

[Claim 3]

The electronically controlled elevator according to claim 1, wherein the speed monitoring curve should be constant at 110 to 130% of a rated speed of the car in a middle region of the scope of fallback and the limiting speed should become zero at a position that is at a certain distance from the particular floor, based on an average deceleration during braking of the brake.

[Claim 4]

The electronically controlled elevator according to any one of claims 1 to 3, wherein, if a plurality of scopes of fallback can be set, a fallback operation is performed preferentially in a scope in which the car travels a longer distance in the hoistway.

[Claim 5]

The electronically controlled elevator according to any one of claims 1 to 3, wherein, if a plurality of scopes of fallback can be set, a fallback operation is performed in a scope in which floors have a larger traffic flow.

[Claim 6]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator further comprises a traffic flow database as a database of statistics counting

the number of persons getting in the car and the number of persons exiting the car at each floor and is implemented to set the scope of fallback based on the traffic flow database.

[Claim 7]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator is implemented to decide whether a fallback operation can be performed, based on information as to whether the safety switch is actuated, information on the scope of fallback, and information on the current car position and speed.

[Claim 8]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator is implemented to, when the fallback operation is to be performed, indicate a notice that a fallback operation is performed and floors to be serviced in the fallback operation.

[Document Name] Scope of Claims

[Claim 1]

An electronically controlled elevator whose car services a plurality of floors and equipped with a safety controller that gives a command to shut off a power supply or actuate a brake by an input from a safety switch installed inside a hoistway,

the electronically controlled elevator comprising:

a position and speed detecting device that detects a position and speed of the car; and

a database for distance between floors having floor-to-floor distances stored therein,

wherein the elevator is implemented to set a plurality of scopes of fallback that make possible to a service at a series of floors with the exception of a particular floor which is an intermediate floor; determine with respect to the scope of fallback a speed monitoring curve that defines a limiting speed as a function of the position of the car in the scope of fallback, based on the database for distance between floors; and, if the speed of the car has exceeded the limiting speed, carry out shutting off the power supply or actuating the brake by the safety controller.

[Claim 2]

The electronically controlled elevator according to claim

1, wherein the speed monitoring curve defines the limiting speed that should become zero at a position that is at a certain distance from the particular floor.

[Claim 3]

The electronically controlled elevator according to claim 1, wherein the speed monitoring curve should be constant at 110 to 130% of a rated speed of the car in a middle region of the scope of fallback and the limiting speed should become zero at a position that is at a certain distance from the particular floor, based on an average deceleration during braking of the brake.

[Claim 4]

The electronically controlled elevator according to any one of claims 1 to 3, wherein, a fallback operation is performed preferentially in a scope in which the car travels a longer distance in the hoistway from among the plurality of scopes of fallback which are set.

[Claim 5]

The electronically controlled elevator according to any one of claims 1 to 3, wherein, a fallback operation is performed in a scope in which floors have a larger traffic flow from among the plurality of scopes of fallback which are set.

[Claim 6]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator further comprises

a traffic flow database as a database of statistics counting the number of persons getting in the car and the number of persons exiting the car at each floor and is implemented to set the scope of fallback based on the traffic flow database.

[Claim 7]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator is implemented to decide whether a fallback operation can be performed, based on information as to whether the safety switch is actuated, information on the scope of fallback, and information on the current car position and speed.

[Claim 8]

The electronically controlled elevator according to any one of claims 1 to 3, wherein the elevator is implemented to, when the fallback operation is to be performed, indicate a notice that a fallback operation is performed and floors to be serviced in the fallback operation.