resides in 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 includes 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 and is implemented to set a scope of fallback to perform a fallback operation across a series of floors with the exception of a particular 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).

[Advantageous Effect of Invention]

[0013]

According to the present invention, with respect to a scope of fallback, a speed monitoring curve is determined that defines a limiting speed as a function of the position of the car, based on the database for distance between floors. It is thus possible to enhance safety in a region out of service of the elevator. In particular, it is possible to avoid service

[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 scope of fallback to perform a fallback operation across a series of floors with the exception of a particular 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 the particular floor is an intermediate floor and 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 the particular floor is an intermediate floor and 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

resides in 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 includes 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 and 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).

[Advantageous Effect of Invention]

[0013]

According to the present invention, with respect to a scope of fallback, a speed monitoring curve is determined that defines a limiting speed as a function of the position of the car, based on the database for distance between floors. It is thus possible to enhance safety in a region out of service of the elevator. In particular, it is possible to avoid service

[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