Appeal decision

Appeal No. 2012-23592

Tokyo, Japan
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The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2007-512378, entitled "ELEVATOR APPARATUS" (the international Patent Publication published on October 12, 2006 No. WO2006/106574) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

No. 1 History of the procedures

The application of the case is the application dated March 31, 2005 as an international filing date, and national documents were filed on March 1, 2006, and a notice of reasons for refusal was issued on May 10, 2011. For this, the written opinion and the written amendment were filed on July 1, 2011, the last notice of reasons for refusal was issued on December 26, 2011. For this, the written opinion and the written amendment were filed on March 9, 2012, but according to the decision to dismiss the amendment dated on September 28, 2012, the amendment dated on March 9, 2012 submitted by the written amendment concerning specification, the scope of claims, or drawings should be dismissed, a decision for refusal was issued on the same day. For this, the appeal for the decision for refusal was requested on November 29, 2012, at the same, the amendment concerning the scope of claims was filed on the same day, subsequently, Written Inquiry was sent by the body on April 9, 2013. For this, the response letter was filed on May 29, 2013.

No. 2 decision to dismiss the amendment dated on November 29, 2012

[Conclusion of decision of dismissal of amendment]

The amendment dated on November 29, 2012 shall be dismissed.

[Reason]

[1] Detail of amendment

The amendment dated on November 29, 2012 (hereinafter referred to as the "Amendment") was to amend claims with respect to the scope of claims for patent from: "Claims 1 to 7 shown in (a) below" before amended by the Amendment, namely amended by the written amendment submitted on July 1, 2011, to: "Claims 1

to 7 shown in (b) below".

(a) Claims before the Amendment

"[Claim 1]

An elevator apparatus, comprising: a plurality of sensors for generating detection signals for detecting a state of an elevator; an elevator control portion where the detection signals from the sensors are input and operation of a car is controlled on the basis of the input detection signals; and an electronic safety controller for detecting abnormality of the elevator on the basis of the input detection signals where the detection signals from the sensors are input and outputting a command signal for shifting the elevator to a safe state, wherein, transmission of at least part of the detection signal and the command signal is performed through radio communication.

[Claim 2]

The elevator apparatus according to Claim 1, comprising: communication portions which are disposed respectively in the sensor, the electronic safety controller, and the elevator control portion, and perform transmission of the signals thereamong through radio communication.

[Claim 3]

The elevator apparatus according to Claim 1, wherein the electronic safety controller perform transmission of a command signal for stopping the car at a nearest floor through the radio communication and perform transmission of a command signal for stopping the car at an emergency through the cable communication.

[Claim 4]

The elevator apparatus according to Claim 1, wherein the electronic safety controller can detect abnormality in the electronic safety controller itself and outputs the command signal for shifting the elevator to a safe state also when detecting the abnormality in the electronic safety controller itself.

[Claim 5]

The elevator apparatus according to Claim 1, wherein the electronic safety controller can detect abnormality in the sensor and outputs a command signal for shifting the elevator to a safe state also when detecting abnormality in the sensor.

[Claim 6]

The elevator apparatus according to Claim 1, wherein the electronic safety

controller includes: a first microprocessor for performing calculation processing for detecting abnormality in the elevator on the basis of a first safety program, and a second microprocessor for performing calculation processing for detecting abnormality in the elevator on the basis of a second safety program, and the first microprocessor and the second microprocessor are capable of mutual communication via an inter-processor bus, and capable of checking soundness of the first microprocessor and the second microprocessor themselves by mutually comparing results of the calculation processing.

[Claim 7]

The elevator apparatus according to Claim 1, wherein transmission of the signals between the car and the elevator control portion is also performed through the radio communication."

(b) Claims after the Amendment

"[Claim 1]

An elevator apparatus, comprising: a plurality of sensors for generating detection signals for detecting a state of an elevator; an elevator control portion where the detection signals from the sensors are input and operation of a car is controlled on the basis of the input detection signals; and an electronic safety controller for detecting abnormality of the elevator on the basis of the input detection signals where the detection signals from the sensors are input and outputting a command signal for shifting the elevator to a safe state, wherein transmission of at least a part of the detection signal and the command signal is performed through the radio communication, transmission of information between the electronic safety controller and the elevator control portion is performed through the radio communication, the detection signal from the sensor is transmitted to the electronic safety controller through radio communication, the radio communication is multiplex communication, and an emergency stopping command from the electronic safety controller to a safety circuit for suddenly stopping the car when abnormality occurs in the elevator is transmitted through a communication cable.

[Claim 2]

The elevator apparatus according to Claim 1, comprising: communication portions which are disposed respectively in the sensor, the electronic safety controller, and the

elevator control portion, and perform transmission of the signals thereamong through the radio communication.

[Claim 3]

The elevator apparatus according to Claim 1, wherein the electronic safety controller perform transmission of a command signal for stopping the car at a nearest floor through the radio communication.

[Claim 4]

The elevator apparatus according to Claim 1, wherein the electronic safety controller can detect abnormality in the electronic safety controller itself and outputs the command signal for shifting the elevator to a safe state also when detecting the abnormality in the electronic safety controller itself.

[Claim 5]

The elevator apparatus according to Claim 1, wherein the electronic safety controller can detect abnormality in the sensor and outputs the command signal for shifting the elevator to a safe state also when detecting the abnormality in the sensor.

[Claim 6]

The elevator apparatus according to Claim 1, wherein the electronic safety controller includes: a first microprocessor for performing calculation processing for detecting abnormality in the elevator on the basis of a first safety program, and a second microprocessor for performing the calculation processing for detecting the abnormality in the elevator on the basis of a second safety program, and the first microprocessor and the second microprocessor are capable of mutual communication via an inter-processor bus, and capable of checking soundness of the first microprocessor and the second microprocessor themselves by mutually comparing results of the calculation processing.

[Claim 7]

The elevator apparatus according to Claim 1, wherein transmission of the signals between the car and the elevator control portion is also performed through the radio communication."

(Furthermore, underlines were added by the appellant to indicate the amendment part.)

[2] Purpose of Amendment

Because, with respect to Claim 1 of the scope of claims, Claim 1 after the Amendment aims to change: a description of, in the scope of claims before the Amendment, "An elevator apparatus, wherein, transmission of at least a part of the detection signal and the command signal is performed through the radio communication."; to a description of "An elevator apparatus, wherein transmission of at least a part of the detection signal and the command signal is performed through the radio communication,

transmission of information between the electronic safety controller and the elevator control portion is performed through the radio communication,

the detection signal from the sensor is transmitted to the electronic safety controller through the radio communication,

the radio communication is multiplex communication,

and an emergency stopping command from the electronic safety controller to a safety circuit for suddenly stopping the car when abnormality occurs in the elevator is transmitted through a communication cable.", it may be said that Claim 1 after the Amendment restricts a configuration of "transmission of electrical signals" in the "elevator apparatus" which is matters specifying the invention of the invention relating to Claim 1 of the scope of claims before the Amendment. Thereby, the Amendment with respect to Claim 1 of the scope of claims includes restricted matters specifying the invention of the invention claimed in Claim 1 of the scope of claims before the Amendment, so that the Amendment falls under amendment aiming to Restriction of the scope of claims of Article 17-2(4)(ii) of the Patent Act before revision by the Act No. 55 of 2006, of which the provisions then in force shall remain applicable according to revision supplement Article 3(1) of the Act No. 55 of 2006.

Accordingly, it will be examined below whether the appellant should be granted a patent for the invention claimed in Claim 1 of the scope of claims amended by the Amendment (hereinafter referred to as "Amended Invention ") independently at the time of patent application.

[3] Judgment on Independent requirements for patentability

1. Publication

(1) Described matters in Publication

The Japanese Unexamined Patent Application Publication No. 2004-137055 (hereinafter referred to as a "publication") which was cited as reasons for refusal of the examiner's decision and is a publication distributed before the priority date of the application describes the following matters together with drawings.

a) "[0004]
FIG. 15 is a figure showing a structure of a conventional elevator control device, where a structure of an elevator control device in a rope type elevator for raising and lowering a car 3 and a counterweight 4 in a well bucket manner through a rope 2 by drive of a hoisting machine 1 is shown.
[0005]
A main control circuit (CPU) 11 constituting a main control device performs basic control of an elevator such as drivingly controlling the hoisting machine 1 by receiving output signals from a rotation sensor 5 disposed at a shaft end 1a of the hoisting machine 1. Further, a control circuit (CPU) 21 constituting a terminal floor forced deceleration device is disposed in a system different from the main control circuit 11." (Paragraphs [0004] and [0005])

b) "[0036]
(First embodiment)
FIG. 1 is a figure showing a structure of an elevator control device in a first embodiment of the Invention. In addition, in the device structure of FIG. 1, explanation is given by designating the same symbols at a part common to a structure of the elevator control device shown in FIG. 15 as a conventional sample.
[0037]
As illustrated in FIG. 1, in the elevator control device in the rope type elevator for raising and lowering a car 3 and a counterweight 4 in a well bucket manner through a rope 2 by drive of a hoisting machine 1, a control circuit (a sub controller) 21 of a terminal floor forced deceleration device is disposed independently apart from a main control circuit (a main controller) 11 for performing basic control of the elevator.
[0038]

Output of a plurality of limit switches 6a to 6f for detecting a position in the vicinity of a terminal floor of the car 3 and output of a car speed detection device 7 for detecting speed of the car 3 are connected to the control circuit 21 of the terminal floor forced deceleration device. In a sample of FIG. 1, limit switches 6a, 6b, and 6c are disposed in a row from the lowest floor side to an upper direction at predetermined intervals, and limit switches 6d, 6e, and 6f are disposed in a row from a top floor side to a lower direction at predetermined intervals. These limit switches 6a to 6f detect, at each position of the limit switches, passing of a landing detecting plate not shown in the figure mounted on the car 3 to output a signal of the position to the control circuit 21.

[0039]

The control circuit 21 for achieving a terminal floor deceleration stopping device in a software manner includes a microcomputer (CPU). Signals from each limit switch 6a to 6f and signals from the car speed detection device 7 disposed at a shaft end of a governor (a speed regulator) not shown in the figure are input to the control circuit 21. These signals are processed in a software manner, thereby, the car 3 are decelerated and stopped in the vicinity of the terminal floor.

[0040]

The control circuit 21 includes a WDT monitoring circuit 22. The WDT monitoring circuit 22 repeatedly performs count operation from 0 to N when the control circuit 21 operates normally. The WDT monitoring circuit 22 turns a WDT signal ON to out the signal to an automatic reset circuit 24 when abnormality occurs in the control circuit 21 to be in a state that a count value cannot be cleared to zero even if the count value reaches a predetermined value N (called as WDT trip). The WDT monitoring circuit 22 is also connected to the main control circuit 11, a state of the WDT monitoring circuit 22 can be always monitored at the main control circuit 11.

[0041]

The automatic reset circuit 24 outputs a reset signal to the control circuit 21 when the WDT signal of the WDT monitoring circuit becomes ON. In this case, although a conventional reset circuit 22 shown in FIG. 15 holds a reset signal until a maintenance person performs a reset release operation, the automatic reset circuit 24 has an automatic reset release function, and is configured so that the reset release is performed after constant time, for example, by a timer.

[0042]

A buffer 8a for the car 3 and a buffer 8b for the counterweight 4 are disposed in an elevator shaft pit. The buffers 8a and 8b are disposed at a pit lower part to mitigate impact to the car 3 or the counterweight 4, respectively.

[0043]

A structure of a relay circuit of the invention is shown in FIG. 2.

[0044]

In FIG. 2, the same symbols are designated at a part same as a conventional relay circuit shown in FIG. 16. A point different from the conventional circuit is that when the terminal floor forced deceleration device detects abnormality in speed of the car, the relay circuit of the invention shuts down the safety circuit and sets a relay for stopping the elevator at an emergency to be bcon (an ON state).

[0045]

The control circuit 21 of the terminal floor forced deceleration device is connected with a terminal floor forced deceleration relay (1SR) 31, if the control circuit 21 turns output OFF, the terminal floor forced deceleration relay (1SR) 31 is turned OFF. A condition of a safety circuit relay (SCR) 32 includes the terminal floor forced deceleration relay (1SR) 31, if the terminal floor forced deceleration relay (1SR) 31 is turned OFF, the safety circuit relay (SCR) 32 is turned OFF. If a condition of a brake control circuit relay (BKR) 33 includes the safety circuit relay (SCR) 32 and the safety circuit relay (SCR) 32 is turned OFF, the brake control circuit relay (BKR) 33 is turned OFF. When the brake control circuit relay (BKR) 33 is an ON state, a brake coil (BK) 34 is energized, thereby, a brake of the hoisting machine 1 becomes in state that the brake is opened (a brake OFF). On the other hand, when brake control circuit relay (BKR) 33 is an OFF state, energization of a brake coil (BK) 34 is interrupted, thereby, a brake of the hoisting machine 1 becomes in a state that the brake is released (a brake ON).

[0046]

A main control circuit 11 is connected with an inverter 35 for motor drive control, and a gate output for controlling the inverter 35 is shut off if the safety circuit relay (SCR) 32 is turned OFF.

[0047]

Here, the control circuit 21 of the terminal floor deceleration device normally makes

the terminal floor forced deceleration relay (1SR) 31 turn ON. Thereby, the brake does not operate and the car 3 normally stops at a terminal position. If speed of the car 3 exceeds a predetermined value when the car 3 passes through the limit switches 6a to 6f in the elevator shaft pit, the terminal floor forced deceleration relay (1SR) 31 is turned OFF to stop the inverter 35, at the same time, the car 3 is forced to decelerate to rated speed or less to stop when the car is brought into contact with the buffer 8a by braking the hoisting machine 1 (the counterweight 4 is brought into contact with the buffer 8b during rising operation)." (Paragraphs [0036] to [0047])

c) "[0056]
(Second embodiment)
Next, referring to FIG. 5 and FIG. 6, the second embodiment of the Invention will now be described.
[0057]
FIG. 5 is a figure showing a structure of the elevator control device in the second embodiment of the Invention, the same symbols are designated at a part same as FIG. 1 (the first embodiment). By the way, because a structure of a relay circuit is same as FIG. 2, explanation will be omitted here.
[0058]
In the second embodiment, a point different from the first embodiment is that communication means 25 is added between the main control circuit 11 and the control circuit 21 of the terminal floor forced deceleration device. The communication means 25 is used for the main control circuit 11 to detect in a software manner whether there is abnormality or not by hand shake between the control circuit 21 and the main control circuit 11, for example, a dual port RAM where bidirectional read / write is possible or a serial transmission device. By directly operating an automatic reset circuit 24, the main control circuit 11 can reset the control circuit 21 or perform reset release.
[0059]
FIG. 6 is a flow chart showing operation of the main control circuit 11 in the second embodiment, and the processing when increment return is used as a method for detecting abnormality of the control circuit 21. Namely, when the main control circuit 11 gives some value to the control circuit 21 and the value is returned while

the value is incremented, the control circuit 21 is considered as to normally operate, and in a case that the value is not incremented, the control circuit 21 is considered as to abnormally operate.

[0060]

As shown in FIG. 6, first, the main control circuit 11 sends a reset release command to the automatic reset circuit 24 to restart the control circuit 21 of the terminal floor forced deceleration device (step C11).

[0061]

Here, the main control circuit 11 reads out data of an increment return area (INC_A) shared with the control circuit 21 (step C12), and reads out a previous increment return value(INCOLD_A) (step C13) to compare both values of the INC_A and the INCOLD_A (step C14). As the result, if the data of the increment return area (INC_A) is updated from the previous increment return value (INCOLD_A), the main control circuit 11 determines that the control circuit 21 normally operates, a current value of the INC_A is stored in the INCOLD_A which is a local area of the main control circuit 11 (step C21), a value of the INC_A is added by one and stored to the INC_A (step C22). During this time, the car 3 is continuously operated.

[0062]

On the other hand, if the value of the INC_A is equal to a previous value, the main control circuit 11 starts a timer disposed in the main control circuit 11 not shown in the figure (step C15) to read again data of the increment return area (INC_A) (step C16). Then, if the timer falls in a timer out state while the value of the INC_A is not updated from the previous value until the timer measures prescribed time set in advance (step C17, Yes in step C18), the main control circuit 11 determines that the control circuit 21 abnormally operates to stop the car 3 at a nearest floor (step C19).

[0063]

Thus, if the main control device is sound, and when the control circuit 21 of the terminal floor forced deceleration device falls in a WDT trip state, because operation of the car 3 can be continued if processing can be started again by applying soft restart through hand shake with the control circuit 21 of the terminal floor forced deceleration device and the main control device, it can be prevented, as same as the first embodiment, that the car 3 is accidentally stopped at a position which is not a terminal floor to confine passengers in the car 3 due to erroneous operation of the

control circuit 21, and safety can be further enhanced by adding a function for detecting operation abnormality of the control circuit 21 other than monitoring of the WDT signal." (Paragraphs [0056] to [0063])

(2) Things recognized by description of (1) a) to c) above and drawings

The following will be described by paying attention to the elevator control device of FIG. 5 and the relay circuit of FIG. 2 which are described as the second embodiment, while referring the elevator control device of FIG. 15 described as a conventional example, and the elevator control device of FIG. 1 and the relay circuit of FIG. 2 described as the first embodiment.

i) When reviewing description of (1) c) above and FIG. 5 by referring description of (1) a) above and FIG. 15 and (1) b) above and FIG. 1, it is recognized that the rotation sensor 5, the car speed detection device 7, and the limit switches 6a to 6f generate detection signals for detecting a state of the elevator.

ii) When reviewing description of (1) c) above and FIG. 5 by referring description of (1) a) above and FIG. 15 and (1) b) above and FIG. 1, it is recognized that the main control circuit 11 is input with the detection signal from the rotation sensor 5, and performs the basic control of the elevator such as drivingly controlling the hoisting machine 1 on the basis of the input detection signal.

iii) When reviewing description of (1) c) above and FIG. 5 by referring description of (1) a) above and FIG. 15 and (1) b) above and FIG. 1, and FIG. 2, because: "a control circuit (CPU) 21 structuring a terminal floor forced deceleration device is disposed in a system different from the main control circuit 11."; "The control circuit 21 for achieving a terminal floor deceleration stopping device in a software manner."; "terminal floor forced deceleration device is a safety device for detecting a state where the car 3 cannot decrease speed within prescribed speed at a predetermined position during traveling toward a terminal floor in an elevator shaft pit and for safely stopping the car 3."; "Signals from each limit switch 6a to 6f and signals from the car speed detection device 7 disposed at a shaft end of a governor (a speed regulator) not shown in a figure are input to the control circuit 21."; and "If speed of the car 3

exceeds a predetermined value when the car 3 passes through the limit switches 6a to 6f in the elevator shaft pit, the terminal floor forced deceleration relay (1SR) 31 is turned OFF to stop the inverter 35, at the same time, the car 3 is forced to decelerate to rated speed or less to stop when the car 3 is brought into contact with the buffer 8a by braking the hoisting machine 1 (the counterweight 4 is brought into contact with the buffer 8b during rising operation).",it is recognized that: Detection signals from each limit switch 6a to 6f and signals from the car speed detection device 7 are input to the control circuit 21, abnormality of the elevator is detected on the basis of the input detection signals to output a command signal for shifting the elevator to a safe state.

iv) When reviewing description of (1) c) above and FIG. 5 by referring description of (1) a) above and FIG. 15 and (1) b) above and FIG. 1, because "communication means 25 is added between the main control circuit 11 and the control circuit 21 of the terminal floor forced deceleration device. The communication means 25 is used for the main control circuit 11 to detect in a software manner whether there is abnormality or not by hand shake between the control circuit 21 and the main control circuit 11, for example, a dual port RAM where bidirectional read/write is possible or a serial transmission device or the like is used. By directly operating an automatic reset circuit 24, the main control circuit 11 can reset the control circuit 21 or perform reset release.", it is recognized that: transmission of information is performed between the control circuit 21 and the main control circuit 11.

v) When reviewing description of (1) c) above and FIG. 5 by referring description of (1) a) above and FIG. 15 and (1) b) above and FIG. 1, and FIG. 2, because: "a control circuit (CPU) 21 structuring a terminal floor forced deceleration device is disposed in a system different from the main control circuit 11."; "The control circuit 21 for achieving a terminal floor deceleration stopping device in a software manner."; "the terminal floor forced deceleration device is a safety device for detecting a state where the car 3 cannot decrease speed within prescribed speed at a predetermined position during traveling toward a terminal floor in an elevator shaft pit and for safely stopping the car 3."; "Signals from each limit switch 6a to 6f and signals from the car speed detection device 7 disposed at a shaft end of a governor (a speed regulator) not

shown in the figure are input to the control circuit 21."; "a relay, by which the safety circuit is shut down to suddenly stop the elevator when the terminal floor forced deceleration device detects abnormality in speed of the car, is set to be bcon (an ON setting)."; " The control circuit 21 of the terminal floor forced deceleration device is connected with the terminal floor forced deceleration relay (1SR) 31, if the control circuit 21 turns output OFF, the terminal floor forced deceleration relay (1SR) 31 is turned OFF. A condition of a safety circuit relay (SCR) 32 includes the terminal floor forced deceleration relay (1SR) 31, if the terminal floor forced deceleration relay (1SR) 31 is turned OFF, then the safety circuit relay (SCR) 32 is turned OFF. A condition of a brake control circuit relay (BKR) 33 includes the safety circuit relay (SCR) 32, if the safety circuit relay (SCR) 32 is turned OFF, then the brake control circuit relay (BKR) 33 is turned OFF"; "When the brake control circuit relay (BKR) 33 turns OFF, energization of the brake coil (BK) 34 is interrupted, thereby, a brake of the hoisting machine 1 becomes in a state that the brake is released (a brake ON)."; "The main control circuit 11 is connected with the inverter 35 for motor drive control, and a gate output for controlling the inverter 35 is shut off if the safety circuit relay (SCR) 32 is turned OFF."; and "If speed of the car 3 exceeds a predetermined value when the car 3 passes through the limit switches 6a to 6f in the elevator shaft pit, the terminal floor forced deceleration relay (1SR) 31 is turned OFF to stop the inverter 35, at the same time, the car 3 is forced to decelerate to rated speed or less to stop when the car is brought into contact with the buffer 8a by braking the hoisting machine 1 (the counterweight 4 is brought into contact with the buffer 8b during rising operation).",it is recognized that: an emergency stop command for stopping the car at an emergency is transmitted from the control circuit 21 to the safety circuit when abnormality occurs in the elevator.

(3) Invention described in publication

Therefore, by summing up (1) and (2) described above, it is recognized that, in a publication, the following Invention (hereinafter referred to as the "Invention described in publication") is described.

<Invention described in publication>

"An elevator apparatus, comprising:

a rotation sensor 5, limit switches 6a to 6f, and a car speed detection device 7 for generating detection signals for detecting a state of an elevator;

a main control circuit 11 where the detection signal from the rotation sensor 5 is input and basic control of the elevator such as drivingly controlling a hoisting machine 1 is performed on the basis of the input detection signal;

and a control circuit 21 where the detection signals from the limit switches 6a to 6f and the car speed detection device 7 are input to detect abnormality of the elevator on the basis of the input detection signals and outputting a command signal for shifting the elevator to a safe state,

wherein, transmission of the detection signal and the command signal is performed,

transmission of information between the control circuit 21 and the main control circuit 11 is performed, the detection signals from the limit switches 6a to 6f and the car speed detection device 7 is transmitted to the control circuit 21, and an emergency stop command for stopping in an emergency the car when abnormality occurs in the elevator is transmitted from the control circuit 21 to a safety circuit."

2. Comparison/judgment

In comparison of the Amended Invention with the Invention described in the publication, as viewed from a function, a structure, or technical significance, descriptions of, in the Invention described in publication, "performs the basic control of the elevator such as drivingly controlling the hoisting machine 1", "the main control circuit 11", "the control circuit 21", "is transmitted to the control circuit 21", "an emergency stop", "the emergency stop command ", and "the safety circuit "; correspond to descriptions of, in the Amended Invention respectively, "controls operation of the car", "the elevator control unit", "the electric safety controller", "transmits to the electric safety controller", "the sudden stop", "the emergency stop command", and "the safety circuit unit".

Further, descriptions of, in the Invention described in the publication, "the rotation sensor 5", "the limit switches 6a to 6f", and "the car speed detection device 7" are things to generate a detection signal for detecting the state of the elevator respectively, thereby, and correspond to a description of, in the Amended Invention, "the sensor",

and descriptions of, in the Invention described in the publication, "the rotation sensor 5", "the limit switches 6a to 6f", and "the car speed detection device 7", correspond to a description of, in the Amended Invention, "the plurality of sensors".

Then, the Amended Invention and the Invention described in the publication are common in a point of "An elevator apparatus comprising:

a plurality of sensors for generating a detection signal for detecting a state of an elevator;

an elevator control unit where the detection signal from a sensor is input to control operation of a car on the basis of the input detection signal;

and an electric safety controller where the detection signal from the sensor is input to detect abnormality of the elevator on the basis of the input detection signal, and a command signal for shifting the elevator to a safe state is output,

wherein transmission of the detection signal and the command signal is performed,

transmission of information between the electric safety controller and the elevator control unit is performed,

the detection signal from the sensor is transmitted to the electric safety controller,

and an emergency stop command for suddenly stopping the car when abnormality occurs in the elevator is transmitted from the electric safety controller to a safety circuit unit.", and differ in the following points.

<The different feature>

With respect to "transmission" of "a detection signal and a command signal", "information", and "an emergency stop command", it is a different point where, in the Amended Invention, "transmission of at least a part of signals of the detection signal and the command signal is performed through radio communication", "transmission of the information is performed through the radio communication", "the detection signal from the sensor is transmitted to the electric safety controller through the radio communication", "the radio communication is multiplex communication", and "the emergency stop command is transmitted through a communication cable", whereas in the Invention described in the publication, it is unknown whether the Invention described in publication becomes same as the Amended Invention (hereinafter referred to as "the different feature ").

The different feature will be examined as follows:

In an elevator apparatus, a problem, for employing a radio system instead of a cable system in order to reduce the number of a communication cable (signal lines) in signal transmission, is equivalent to a well-known problem before the application of the case (for example, Japanese Unexamined Patent Application Publication No. S64-60586 [in particular, from the 2nd line of the lower right column to the end line in page 2 and from the 8th line of the upper left column to the 4th line of the upper right column in page 5] and Japanese Unexamined Patent Application Publication No. H6-227766 [in particular, see [0002] and [0066]] etc., hereafter referred to as "well-known problem "), thereby, considering the well-known problem, it may be said also that the same problem is inherent in the Invention described in the publication.

On the other hand, with respect to a configuration of the signal transmission in the elevator apparatus, employing the cable system for transmission of the safety circuit signal (for suddenly stopping the car), and employing a system including the radio system for transmission of the other signals are equivalent to the well-known art before the application of the case (for example, Japanese Unexamined Patent Application Publication No. S64-60586 [in particular, from the 16th line of the upper right column to the 2nd line of the lower left column in page 4 and from 8 the line of the upper left column to the 4th line of the upper right column in page 5 and the second figure] and Japanese Unexamined Patent Application Publication No. H6-227766 [in particular, see paragraphs [0003]] etc., hereafter referred to as "well-known art 1"), further, employing the multiplex communication for the radio communication in order to improving reliability of the signal transmission is equivalent to the well-known art before the application of the case (for example, Japanese Unexamined Patent Application Publication No. H6-227766 [in particular, see [0060] and [0065]] etc., hereafter referred to as "well-known art 2").

Then, in the Invention described in the publication, it could be easily arrived at by a person skilled in the art that, with respect to transmission of the detection signal, the command signal, the information, and "the emergency stop command (corresponding to “the emergency stop command" in the Amended Invention)”, while taking the well-known problem into consideration, the well-known arts 1 and 2 are applied to

define matters specifying the Invention of the Amended Invention related to the different feature.

Then, the Amended Invention does not provide specific effect beyond effect predicted on the basis of the Invention described in the publication 1, and the well-known problem, the well-known arts 1 and 2 if viewing as a whole.

Therefore, the Amended Invention could be easily made by a person skilled in the art on the basis of the Invention described in the publication 1, the well-known problem, and the well-known arts 1 and 2, thereby, the appellant should not be granted a patent for it independently at the time of patent application under the provisions of Article 29(2) of the Patent Act.

3. Conclusion

As described above, since Amendment violates the provisions of Article 126(5) of the Patent Act which is applied mutatis mutandis pursuant to the provisions of Article 17-2(5) of the Patent Act before revision by the Act No. 55 of 2006, of which the provisions then in force shall remain applicable according to revision supplement Article 3(1) of the Act No. 55 of 2006, the Amendment should be dismissed under the provisions of Article 53(1) of the Patent Act to be applied mutatis mutandis in 159(1) of the Patent Act.

Therefore, decision shall be made as described in the conclusion.

No.3 Regarding the Invention

1. The Invention

Since the Amendment dated November 29, 2012 is dismissed as described above, the Invention claimed in Claim 1 to Claim 7 of the scope of claims of the application of the case is recognized as a thing as specified by the matter described in Claim 1 to Claim 7 of the scope of claims, as viewed from the scope of claims amended

according to a written amendment dated July 1, 2011 and descriptions in the specifications and drawings at the initial application, and the Invention claimed in Claim 1 (hereinafter referred to as "The Invention ") is as a thing as described in Claim 1 represented in the No. 2 [Reason][1](a).

2. Publication

(1) Described matters in Publication

The thing as described in the No. 2 [Reason][3]1.(1) and (2) cited for reasons for refusal of the examiner's decision is described in the publication (Japanese Unexamined Patent Application Publication No. 2004-137055).

(2) Invention 1 described in publication

Therefore, by summing up (1) and (2) described above, it is recognized that following Invention is described in the publication (hereafter referred to as "Invention 1 described in publication").

<Invention 1 described in publication>

"An elevator apparatus, comprising:

a rotation sensor 5, limit switches 6a to 6f, and a car speed detection device 7 for generating detection signals for detecting a state of an elevator;

a main control circuit 11 where the detection signal from the rotation sensor 5 is input and basic control of the elevator such as drivingly controlling a hoisting machine 1 is performed on the basis of the input detection signal;

and a control circuit 21 for detecting abnormality of the elevator on the basis of the input detection signals where the detection signals from the limit switches 6a to 6f and the car speed detection device 7 are input and outputting a command signal for shifting the elevator to a safe state,

wherein, transmission of the detection signal and the command signal is performed."

3. Comparison/judgment

When comparing the Invention with the Invention 1 described in the publication, in view of a function, a structure, and technical significance of the Invention, descriptions of, in the Invention 1 described in the publication, "performs basic control of the elevator such as drivingly controlling the hoisting machine 1", "the main control circuit 11", and "the control circuit 21" correspond to respectively descriptions of, in the Invention, "controlling operation of the car", "the elevator control unit", "the electric safety controller", and "transmitting to the electric safety controller".

Further, since "the rotation sensor 5", "the limit switches 6a to 6f", and "the car speed detection device 7" in Invention 1 described in publication generate the detection signals for detecting the state of the elevator respectively, these correspond to "the sensor " in The Invention, and "the rotation sensor 5", "the limit switches 6a to 6f", and "the car speed detection device 7" in the Invention 1 described in the publication correspond to "a plurality of sensors" in the Amended Invention.

Then, the Invention and the Invention 1 described in the publication are common in a point of "An elevator apparatus comprising:

a plurality of sensors for generating a detection signal for detecting a state of an elevator;

an elevator control unit where the detection signal from the sensor is input to control operation of a car on the basis of the input detection signal;

and an electric safety controller where the detection signal is input from the sensor to detect abnormality of the elevator on the basis of the input detection signal, and a command signal for shifting the elevator to a safe state is output,

wherein transmission of the detection signal and the command signal is performed.", and differ in the following point.

<The different feature 1>

With respect to "transmission" of "a detection signal and a command signal", it is a different point where in the Invention," transmission of at least a part of signals of the detection signal and the command signal is performed through radio communication",

whereas in the Invention 1 described in the publication, it is unknown whether " transmission of at least a part of signals of the detection signal and the command signal is performed through radio communication" (hereafter referred to as "the different feature 1").

The different feature 1 will be examined as follows:

In the elevator apparatus, as described above in the No. 2 [Reason][3]2., a problem, for employing a radio system instead of a cable system in order to reduce the number of a communication cable (signal lines) in signal transmission, is the well-known problem before the application of the case (for example, Japanese Unexamined Patent Application Publication No. S64-60586 [in particular, from the 2nd line of the lower right column to the end line in page 2 and from the 8th line of the upper left column to the 4th line of the upper right column in page 5] and Japanese Unexamined Patent Application Publication No. H6-227766 [in particular, see [0002] and [0066]] etc., hereafter referred to as "well-known problem "). Thereby, in view of the well-known problem, it may be said that the same problem is inherent in the Invention 1 described in the publication.

On the other hand, with respect to a configuration of signal transmission in the elevator apparatus, employing a radio system for transmission of at least a part of the signal transmission are equivalent to the well-known art before the application of the case (for example, Japanese Unexamined Patent Application Publication No. S64-60586 [in particular, from the 16th line of the upper right column to the 2nd line of the lower left column in page 4 and from 8 the line of the upper left column to the 4th line of the upper right column in page 5 and the second figure] and Japanese Unexamined Patent Application Publication No. H6-227766 [in particular, see paragraphs [0003]] etc., hereafter referred to as "well-known art 3"),

Then, in the Invention 1 described in the publication, it could be easily arrived at by a person skilled in the art that, with respect to transmission of the detection signal and the command signal, while taking the well-known problem into consideration, the well-known arts 3 are applied to define matters specifying the Invention related to the different feature 1.

Then, the Invention does not provide specific effect beyond effect predicted on the

basis of the Invention 1 described in the publication, the well-known problem and the well-known art 3 if viewing as a whole.

4. Conclusion

As described above, the Invention could be provided easily by a person skilled in the art according to the Invention 1 described in the publication, the well-known problem, and the well-known art 3, thus, the appellant should not be granted a patent for the Invention in accordance with the provisions of Article 29(2) of the Patent Act.

The appeal decision shall be made as described in the conclusion.

October 17, 2013

Chief administrative judge: ITO, Asahito
Administrative judge: NAKAGAWA, Ryuji
Administrative judge: HAYASHI, Shigeki