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**Datasheet for the decision
of 26 March 2024**

Case Number: T 0131/22 - 3.2.06

Application Number: 08758980.0

Publication Number: 2297017

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Language of the proceedings: EN

Title of invention:

SINGLE BRAKESHOE TEST (ELECTRICAL) FOR ELEVATORS

Patent Proprietor:

Otis Elevator Company

Opponent:

INVENTIO AG

Headword:

Relevant legal provisions:

EPC 1973 Art. 56, 84

RPBA 2020 Art. 12(3), 12(5)

Keyword:

Inventive step - (yes)

Discretion not to admit submission - requirements of Art.

12(3) RPBA 2020 met (no) - submission admitted (no)

Adaptation of description to amended claims

Decisions cited:

T 2063/15

Catchword:



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Case Number: T 0131/22 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 26 March 2024

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 November 2021 concerning maintenance of the
European Patent No. 2297017 in amended form.**

Composition of the Board:

Chairman M. Harrison
Members: T. Rosenblatt
J. Hoppe

Summary of Facts and Submissions

- I. The appellant (opponent) filed an appeal against the interlocutory decision of the opposition division, in which it found that European patent No. 2 297 017 in an amended form met the requirements of the EPC.

The present appeal is the second in the opposition procedure against this patent. The first appeal lay from the rejection of the opposition and led to decision T 2063/15 by this Board in another composition. In that appeal case, the Board remitted the case for further prosecution on the basis of a fourth auxiliary request. This request subsequently constituted the basis for the main request (except for a change of the two-part form in one of the independent claims) in the continued opposition procedure and was finally considered by the opposition division to meet the requirements of the EPC. This request was attached to the impugned decision of 17 November 2021 as "Main Request" and resubmitted as being the main request in the present appeal proceedings (see page 2 of the respondent's reply dated 5 August 2022) and referred to in the Order of this decision (see below) as being "filed with the reply to the grounds of appeal".

- II. The parties were summoned to oral proceedings before the Board.
- III. In a subsequent communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), the Board informed the parties of its preliminary opinion in the present case.

- IV. Oral proceedings before the Board were held on 26 March 2024.
- V. The appellant requested that the decision under appeal be set aside and the European patent be revoked, or as an auxiliary measure that the description be amended with respect to the embodiment in figure 4.
- VI. The respondent (patent proprietor) requested that the appeal be dismissed (main request) or as an auxiliary measure that the patent be maintained in amended form based on claims 1 to 8 of the main request and an amended description with paragraphs 1 to 91 as filed during the oral proceedings.
- VII. Independent claims 1 and 2 of the main request have the following wording (bold feature numbering in square brackets added, following the numbering in the impugned decision in items 1.18, 1.19 and 1.20).

Claim 1:

"[**1.1**] A control arrangement (100; 200) for an elevator brake (10), comprising
a control circuit (110; 210) [**1.2**] adapted to generate, according to a demand for releasing a first braking member (14) of said elevator brake (10), a first actuating signal and [**1.3**] to generate, according to a demand for releasing a second braking member (16) of said elevator brake (10), a second actuating signal;
[**1.4**] a first terminal (112; 212) for outputting said first actuating signal to a first electromagnetic actuating means (26) of said elevator brake (10);
[**1.5**] a second terminal (114; 214) for outputting said second actuating signal to a second electromagnetic actuating means (30) of said elevator brake (10);

[1.6] said control arrangement (100; 200) being adapted to allow at least the following modes of operation:

[1.7] A) a normal operation mode in which said first and said second actuating signals are supplied synchronously to said first and second electromagnetic actuation means (26, 30), respectively; and

[1.8] B) a single braking member test operation mode, in which one of said first and second actuating signals is supplied to the respective one of said first and second electromagnetic actuating means (26, 30), and an actuating signal for permanently releasing the respective of said first and second braking members (14, 16) is supplied to the other one of said first and second electromagnetic actuating means (26, 30);

[1.9] wherein said actuating signal for permanently releasing said first and/or second braking members (14, 16) is supplied to a third terminal (132, 134; 232) of said control arrangement (100; 200);

characterized in that

[1.10] the control arrangement (100; 200) comprises a connector arrangement (124, 126, 128, 130; 224, 226, 228, 230a, 230b) for connecting said control arrangement (100; 200) to said electromagnetic actuating means (26, 30) of said elevator brake (10);

[1.11] said connector arrangement (124, 126, 128, 130; 224, 226, 228, 230a, 230b), on the controller side, comprising a plurality of first connectors (124, 126, 128; 224, 226, 228);

[1.12] each of said first connectors (124, 126, 128; 224, 226, 228) having a plurality of terminals including said first terminal (112; 212) and/or said second terminal (114; 214);

[1.13] each of said first connectors (124, 126, 128; 224, 226, 228) having said terminals arranged in a same layout;

[1.14] and at least one of said first connectors (124, 126, 128; 224, 226, 228) comprising said third terminal (132, 134; 232); and

[1.15] said connector arrangement (124, 126, 128, 130; 224, 226, 228, 230a, 230b), on the brake side, comprising at least one second connector (130; 230a, 230b) having terminals arranged in a layout complementary to the layout of said first connectors (124, 126, 128; 224, 226, 228)."

Claim 2:

"A control arrangement (100; 200) for an elevator brake (10), comprising

a control circuit (110; 210) adapted to generate, according to a demand for releasing a first braking member (14) of said elevator brake (10), a first actuating signal and to generate, according to a demand for releasing a second braking member (16) of said elevator brake (10), a second actuating signal; a first terminal (112; 212) for outputting said first actuating signal to a first electromagnetic actuating means (26) of said elevator brake (10);

a second terminal (114; 214) for outputting said second actuating signal to a second electromagnetic actuating means (30) of said elevator brake (10);

said control arrangement (100; 200) being adapted to allow at least the following modes of operation:

A) a normal operation mode in which said first and said second actuating signals are supplied synchronously to said first and second electromagnetic actuation means (26, 30), respectively; and

B) a single braking member test operation mode, in which one of said first and second actuating signals is supplied to the respective one of said first and second electromagnetic actuating means (26, 30), and an actuating signal for permanently releasing the

respective of said first and second braking members (14, 16) is supplied to the other one of said first and second electromagnetic actuating means (26, 30); characterized in that

[2.9] the control arrangement (100, 200) further comprises monitoring means for monitoring releasing and engaging of said first and second brake elements (26, 30), respectively;

[2.10] wherein said control arrangement (100; 200) is adapted to suspend said monitoring means in response to a request to enter one of the single braking member test operation modes; and

[2.11] wherein said control arrangement (100; 200) allows, in response to a request to enter one of the single braking member test operation modes, a predetermined number of runs of an elevator car to be braked by said elevator brake (10)."

VIII. The following documents from the impugned decision are referred to in the present decision:

D4 : WO 2007/020325 A2

D8 : WO 2005/066057 A2

D10 : EP 1 127 025 B1

D11 : CA 2 062 393 A1

IX. The arguments of the appellant may be summarised as follows.

Main request - Claim 1 - Article 56 EPC

Claim 1 lacked an inventive step in view of a combination of the system known from D4 with any standard connectors. In the statement of grounds of appeal, the appellant argued that D4 confronted the skilled person with the explicit problem of changing

the configuration in Figure 2 of D4 such that both elevator brakes could be tested with the delay unit 104 of the safety device 113 of D4. In its reply to the Board's communication the appellant redefined the objective technical problem as being to add a safety system according to Figure 2 of D4 to a pre-existing system in a way that is cheap, easy and flexible, whereas during the oral proceedings before the Board, the appellant re-formulated the problem to be the provision of a possible installation technique. The problem would be solved, irrespective of the number of delay units to be used, by providing an appropriate number of standard connectors to lines 111 and 112 in the circuit of Figure 2 of D4. Incentives to add connectors in D4 could be found throughout its description, i.e. by the indication to retrofit elevator systems with the safety device (page 13, lines 13 to 16), by the indication to use the system in Figure 2 of D4 for comparing the physical condition of the brake pads of both brakes (page 16, lines 5 to 8), or for testing a brake after its replacement or adjustment (page 12, line 28 to page 13, line 12).

An elevator system to be retrofitted according to Figure 2 of D4 comprised at least two pairs of electrical lines which connected, before the retrofit, the control unit 100 to the two elevator brakes (106, 107). These lines corresponded to lines 111 and 112 in Figure 2 of D4 (see also Figure 1). The corresponding circuit board of the control unit 100 therefore comprised, before the retrofit, a four-pole connector socket, engaged by a complementary four-pole (or two two-pole) plug(s), from which extended the corresponding two pairs of lines 111 and 112 to the brakes. These four lines comprised also a pair of two-pole plugs at their respective brake-side ends. The

four-pole connector socket on the control unit's circuit board necessarily comprised a first and a second terminal for outputting the respective actuating signals to the respective brakes. For the safety device 113 to be installed according to Figure 2 of D4 in the existing system, at least two lines of the four electrical lines extending from the control unit 100, namely those leading to the brake to be delayed by the delay unit of the safety device, had to be connected to an input side on a circuit board of the safety device. On the output side of this device, corresponding lines had to connect to the brake(s). Since the control unit comprised a four-pole connector arrangement, a corresponding four-pole connector arrangement, or at least a two-pole connector would have to be provided also on the input and output sides of the circuit board of the safety device. The third terminal according to feature 1.14 of claim 1 was then constituted by one of the terminals of the connector on the output side of the safety device to which the delayed brake was connected. The skilled person, applying a standard connector arrangement when retrofitting the safety device of D4 to an elevator system, therefore inevitably arrived at the subject-matter of claim 1.

Main request - Claim 2 - Article 56 EPC

Features 2.9 and 2.10 could not be properly understood, due to, on the one hand contradicting explanations of the proprietor and, on the other hand, a missing interpretation by the Board in the first appeal proceedings and by the opposition division. The appellant was therefore incapable of providing suitable prior art. Since these features did not solve a technical problem they had to be ignored. Features which did not provide a technical solution were not

"unclear", as argued by the opposition division, but lacked an inventive step. Similarly, feature 2.11 did not solve any technical problem either, since it neither limited the number of runs nor did it have any impact on the control of, for example, the elevator motor.

If one could attribute a technical effect to features 2.9 to 2.11, claim 2 would still lack an inventive step over a combination of D4 with D10 or D11. The only sensible understanding of features 2.9 and 2.10 was that the monitoring means were some (undisclosed) means for monitoring engagements of the brakes which were switched off during the brake test (e.g. to avoid false alarms). Feature 2.11 simply required carrying out the number of test runs deemed necessary to test each of the brakes.

D10 and D11 disclosed elevator systems with brakes having monitoring means which triggered an alarm when the actual position of the brake pads differed from their expected position, which occurred when the system in figure 2 of D4 was used in elevator systems with brakes in D10 or D11. This was a realistic scenario, as follows from the teaching in D4 to retrofit the system in figure 2 to existing elevator systems, and from the fact that D10 and D11 were cited in D4. Therefore, the skilled person had an incentive to "suspend" the monitoring means of D10 and D11 during the use of the device 113 in D4 to avoid triggering false alarms. Moreover, the disclosed elevator system in D4 had two brakes, so that a predetermined number of two runs had to be allowed to be braked to achieve the described effect of testing both brakes (cf. first paragraph of page 16 of D4).

Claim 2 also lacked an inventive step in view of D8 or a combination of D8 with D10 or D11. With respect to the details reference was made to page 18 seq. of the appellant's letter dated 25 September 2020, submitted before the opposition division.

Adaptation of the description

In view of the interpretation of the combined features 1.12 and 1.14 given by the Board, the embodiment of Figure 4 of the patent was not covered by claim 1. The description therefore needed amendment in this respect. Also, paragraphs 42, 53 and 59 required amendment since their content was inconsistent with the problem allegedly solved by claim 1, i.e. entering the brake test mode by manual re-plugging, and the problem allegedly solved by claim 2, i.e. stopping the elevator if a worker forgot to re-plug the connectors, thus permanently releasing one brake.

- X. The arguments of the respondent may be summarised as follows.

Main request - Claim 1 - Article 56 EPC

The Board of Appeal in the first appeal had decided that D4 neither explicitly nor implicitly disclosed a connector arrangement as defined by the features 1.10 to 1.15 of claim 1. The technical effect achieved by these features was that switching between the normal operation mode and a single braking member test operation mode could be realized manually by unplugging and replugging at least one of the first connectors on the controller side so as to disconnect one of the first or second terminals and connect a third terminal to the corresponding one of the first and second

braking members, instead of the respective first or second terminal. The claim wording implied that the switching between the two operation modes by unplugging and replugging was achieved by the specific connector arrangement in the characterising portion. The objective technical problem solved by the invention in view of D4 was to provide a single braking member test operation mode which could be activated by a service technician in a simple and reliable manner, without the risk of false activation.

D4 gave no hint towards this problem and was rather directed to an automatically activated single braking member test at the end of each run of the elevator car. It also comprised no hint to using a connector arrangement. The skilled person would anyway have recognised a potential safety risk with the use of connectors and consequently have avoided the use of connectors in the brake circuits. Even by using connectors for implementing the elevator safety system of D4, the skilled person would not have been able to arrive at the control arrangement of claim 1 of the main request. When using standard connectors as argued by the appellant, neither of the first first connector and the second first connector would have included a third terminal for permanently releasing the respective first or second braking members.

Main request - Claim 2 - Article 56 EPC

The combination of features 2.9, 2.10 and 2.11 - which were not known from D4, as already decided in the first appeal proceedings - provided a safety feature: when the elevator was operated with only one holding brake active in the single braking member test operation mode, this operation mode was a potentially dangerous

operation mode. Features 2.9, 2.10 and 2.11 in combination made sure that, after entering the single braking member test operation mode, only a predetermined number of runs of the elevator car was allowed, as also described in paragraph 73 of the patent.

The skilled person reading D4 and taking into consideration their common general knowledge at the filing date of the opposed patent (but without knowledge of the opposed patent), did not have any reason to provide a safety measure as claimed by features 2.9, 2.10 and 2.11. D10 and D11 were silent with respect to any suspending of operation of the monitoring means as required by feature 2.10 and also with respect to feature 2.11, as also held by the opposition division.

Adaptation of the description

Paragraphs 42, 53 and 59 merely described potential features in addition to the combination of features defined in claims 1 and 2. Their disclosure was within the scope of the claims considered allowable and therefore consistent, not requiring any further adaptation.

Reasons for the Decision

Main request - Claim 1 - Article 56 EPC

1. The subject-matter of claim 1 involves an inventive step having regard to the control arrangement disclosed in Figure 2 of D4 as the closest prior art and the common general knowledge of the skilled person (Article 56 EPC).
2. D4 discloses in Figure 2 a control arrangement which comprises the features of the preamble of claim 1. Features 1.10 to 1.15 in the characterising portion of claim 1 constitute the distinguishing features (see also T 2063/15, Reasons 1.1.4, 3.3.1 and 5.3.1).
3. The control arrangement of D4 is provided with a safety device (113) which can be fitted into an existing elevator system, in addition to an already existing control unit (see D4, page 13, lines 13 to 26). In Figure 2 of D4 the safety device (113) is shown to be mounted between the control unit (100) and one (107) of the two elevator brakes (106, 107). The skilled person understands that this control arrangement comprises, necessarily, electrical connections (e.g. power supply lines 111, 112) between, on the one side, the electromagnetic actuating means of the two brakes (106, 107) and, on the other side, the controller which may be seen to be constituted by the control unit (100) and the safety device (113). The necessary electrical connections could in principle be established by several techniques, for example by soldering, crimping or (releasable) connector arrangements. Nevertheless, absolutely no detail of any connector at all is provided in D4.

4. The objective technical problem solved by features 1.10 to 1.15 defining a connector arrangement can be seen as to provide a possible installation technique for retrofitting the safety device to an elevator system.
- 4.1 The technical problems considered by the appellant in the written procedure are not objective problems.

As set out in the Board's communication pursuant to Article 15(1) RPBA, the appellant's alleged objective problem of changing the configuration of the arrangement illustrated in Figure 2 such that both brakes can be tested with the delay unit 104, based in particular on the disclosure at page 16, lines 1 to 8, was not based on an effect achieved by providing the distinguishing connector arrangement. The passage on page 16, lines 1 to 8 of D4 discloses an alternative embodiment to the one illustrated in Figure 2. There would indeed arise the question of how to implement such an embodiment. This issue is nevertheless unrelated to the separate question as to the effect achieved by providing a connector arrangement according to features 1.10 to 1.15 in either of the two embodiments of D4, i.e. in the embodiment according to Figure 2 or the alternative embodiment implementing the teaching of page 16, lines 1 to 8. The Board moreover agrees with the respondent that the entire disclosure of D4 is dedicated to an automatic testing procedure which is (automatically) conducted at the end of each elevator run. The assumption of the appellant that the skilled person may want to manually switch the testing of both brakes in D4 (by changing the location of the delay unit between the two brakes) is therefore a consideration which would only come to mind by hindsight knowledge of the present invention.

The appellant did not specifically contest the reasoning of the Board in its communication, which is hereby confirmed. Instead, the appellant argued in its rejoinder to the Board's communication that the problem was to "add safety system 113 to a pre-existing system in a way that is cheap, easy and flexible". However, the Board also does not consider this problem to be objective. In the absence of any detail of the structure of the electrical connections in D4, it cannot be concluded that the distinguishing features in claim 1 of the main request provide a connector arrangement which is necessarily cheap or flexible or easy when compared to an undisclosed way of connection.

- 4.2 Also the technical problem considered by the respondent, of providing a single braking member test operation mode which can be activated by a service technician in a simple and reliable manner, without the risk of false activation, is not an objective one. Although some particular configurations of the connector arrangement specified by features 1.10 to 1.15 may in fact require the intervention of a technician in order to switch between normal operation and single braking member test operation by unplugging and replugging the connectors, the Board is not convinced that this is necessarily the case for all connector arrangement configurations covered by claim 1. On the one hand and contrary to the contention of the respondent, the wording of claim 1 does not define any feature which establishes a link between the operational modes A and B, the way in which switching between these modes is to be performed (which is not defined in claim 1) and the function and structure of the connector arrangement. On the other hand, claim 1 also does not exclude the connector arrangement being made of a pair respective first and second connectors

where each of the respective first connectors comprises all terminals according to features 1.4, 1.5 and 1.9, and switching between the two modes A and B is nevertheless done electrically/remotely (see also paragraphs 41, 42, 53 and 59 of the patent).

4.3 Since none of the technical effects considered by the parties can be seen to be necessarily achieved by features 1.10 to 1.15 over the whole scope of claim 1, the Board concluded that, compared to the closest prior art, the connector arrangement provided just one possible way of installing the safety device in an existing elevator system.

5. The Board has no doubt that the use of connector arrangements is part of the common general knowledge of the skilled person in the field of elevator systems, even for connecting elevator brakes. The Board is however not convinced that the skilled person, starting from the control arrangement of Figure 2 of D4, and faced with the above objective technical problem, would have arrived at the claimed feature combination in an obvious manner.

5.1 The arguments submitted by the appellant in the statement of grounds of appeal, besides not being based on the correct objective technical problem (see point 4.1 above), fail to explain how the skilled person would have arrived at a connector arrangement with a terminal layout as defined by the combination of features 1.4, 1.5, 1.9 with 1.12 and 1.14. Also the appellant's letter filed in response to the Board's communication pursuant to Article 15(1) RPBA does not contain any indication in this respect.

5.2 The further arguments submitted by the appellant during the oral proceedings are unconvincing since they are essentially based on hindsight.

5.2.1 The appellant's arguments started from the premise that the electrical connection of the control unit (100) to the electromagnetic actuation means of the two elevator brakes (106, 107) in an existing elevator installation in which the safety device (113) was to be installed as shown in Figure 2 of D4, already comprised a connector arrangement for four electrical lines for connecting the two brakes, including a four-pole (or two two-pole) connector socket(s) on the circuit board of the control unit and bipolar connectors at the brake side. The Board can accept that the skilled person would have understood from D4 that the respective brakes in the original elevator system (prior to the retrofit) were connected by (at least) two pairs of electrical lines to the control unit. However, the assumption of the terminals of these four lines being arranged as a four-pole (or two two-pole) connector socket(s) on the circuit board of the control unit is without basis in D4 (cf. reasons 2. and 3. above), as indeed argued by the respondent. The same holds true for the assumption that the end of the electric lines at the brake side would have been provided with respective bipolar-connectors. In the absence of any indication in D4 to connectors all, let alone to the specific connector components considered by the appellant, these assumptions, which were the foundation for the remaining arguments of the appellant, can only be seen as being based on hindsight or pure assumption. The starting point for the appellant's case on inventive step is thus already incorrect.

5.2.2 But even if, for the sake of argument, it were considered that the skilled person had recognised (e.g. on the basis of common general knowledge), that a connector arrangement would be used, which as such would have already constituted a partial solution to the above objective technical problem and would not require any further considerations, it is still not obvious to arrive at a connector arrangement having a terminal layout as defined by the combination of features 1.4, 1.5, 1.9 with 1.12 and 1.14.

5.2.3 It was accepted by the parties that feature 1.11 required at least two first connectors. According to feature 1.12, one of these first connectors comprises (at least) the first terminal, for the function defined in feature 1.4, and a second first connector comprises (at least) a second terminal, for the function defined in feature 1.5. Such a layout might, as such, still be considered obvious to the skilled person who solved the above formulated objective technical problem by the provision of a connector arrangement.

It was also not contested that feature 1.14 required, in addition to the provision of the first and/or second terminal on the respective said first connectors, one of these first connectors to be provided with the third terminal (cf. feature 1.14: "at least one of said first connectors comprising said third terminal", underlining added by the Board) for outputting the actuating signal for permanently releasing one of the two brakes (see feature 1.9).

5.2.4 There is however no apparent motivation for the skilled person, except through knowledge of the invention, to also provide any of the two first connectors, which included either the first or the second terminal, with

a third terminal.

- 5.2.5 During the oral proceedings, the appellant presented, on the basis of Figure 2 of D4, different layouts of the electric circuit for supplying electrical signals/power to the brakes (106, 107). According to these different layouts, the third terminal would have been placed on either a four-pole or a two-pole connector socket installed on the additional circuit board of the safety device (113), at the output side from the delay unit (104), connecting to the brake (107) for which its closure is delayed compared to the brake to be (automatically) tested (106). Such a solution would, however, not comprise the third terminal on one of the first connectors provided with either the first or second terminal (see point 5.2.3 above).

The appellant's further contention that the other pole in such a two-pole connector socket on the outgoing side of the delay unit (104) could be considered as a second terminal according to combined features 1.5 and 1.12 is also unconvincing. Both poles or terminals of the connector would be connected over the capacitor embodying the delay unit. The Board, however, does not agree that the skilled person would understand these two terminals as providing second and third signals as defined by features 1.5 and 1.9 of claim 1. An electrical signal provided by the control unit (100) to one of the terminals of, for example, a two-pole connector socket on the safety device's outgoing side, actuates the electromagnetic actuating means of the delayed brake (107) and also charges the capacitor of the delay unit. This (second) actuating signal on the second terminal does indeed, after being switched off by the control unit, continue to be present for a short duration, essentially depending on the capacitance. The

brake's actuating means keeps the brake open for that duration. The second pole of this two-pole connector socket however, bridged by the capacitor which is going to discharge when the second actuating signal is switched off, cannot provide a third, permanent actuating signal to that brake. This is not how a skilled person would understand this operational state of the system.

- 5.3 The appellant therefore failed to demonstrate that the combination of features according to claim 1 lacks an inventive step when starting from the control arrangement of Figure 2 of D4 in combination with any standard connectors belonging to the common general knowledge of the skilled person.

Main request - Claim 2 - Article 56 EPC

6. The subject-matter of claim 2 also involves an inventive step having regard to the combination of D4 with D10 or D11 (Article 56 EPC).
- 6.1 It was again common ground that the control arrangement known from Figure 2 of D4 can be considered to represent the closest prior art to the subject-matter of claim 2. It was also agreed between the parties that features 2.9 to 2.11 are not disclosed in D4, as also held by the opposition division in the impugned decision (see also T 2063/15, Reasons 5.4.3 to 5.4.5).
- 6.2 The appellant's first line of attack, based on the alleged absence of any recognisable technical effect of features 2.9 to 2.11, is found unconvincing. The contention that neither the Board in the first appeal proceedings nor the opposition division provided an interpretation of features 2.9 or 2.10, or that the

respondent provided allegedly contradicting explanations, does not mean that the features indeed do not have any technical effect or that they could not contribute to an inventive step. The burden of proof for an allegation of lack of inventive step lies with the appellant. It cannot be discharged by essentially stating that the features could not be understood. The Board moreover considers the features to have a clear technical meaning and that they serve to delimit the subject-matter of claim 2 over D4. Even if the technical effect achieved by the provision of these features in the known system of Figure 2 and D4 might be difficult to define, this does not mean that the features can simply be ignored in the assessment of inventive step. To the contrary, this may just constitute a pointer that the skilled person would not arrive in an obvious manner at the subject-matter of claim 2 when starting from D4 as the closest prior art. The appellant's corollary that due to the absence of further information its right to be heard was thereby infringed is, for the same reason, simply unfounded.

6.3 The appellant's second line of attack, based on the assumption that the distinguishing features indeed provided a technical effect, is not convincing either. The appellant did not identify any particular effect and did not formulate a technical problem. Although the use of the problem-solution approach is indeed not mandatory, the appellant's argument on obviousness in this case fails because it is based on a purely hindsight perspective.

6.3.1 The means for monitoring the condition of an elevator brake disclosed in D10 and D11 are acknowledged in D4 as being disadvantageous, as also stated by the opposition division in the impugned decision (see page

11, item 2.3.1.5). The purpose of the invention according to D4 is to avoid the drawbacks of such prior art systems (see D4, page 2, line 12 to page 3, line 10). The argument of the appellant that the safety device disclosed in D4 should be used in the brake systems of D10 or D11 together with the monitoring means disclosed therein, simply because the documents are mentioned in D4, is not what the skilled person would do if they are told that the invention disclosed in D4 intends to overcome drawbacks of such known systems. At least the particular passages of D4 cited by the appellant do not contain any hint from which the skilled person would have been incited to do so. For example, the mention of retrofitting elevator systems with the safety device of D4 (e.g. page 13, lines 13 to 26) does not imply that elevator systems specifically equipped with the monitoring means of D10 or D11 are envisaged for retrofitting, let alone that the safety device seeking to overcome the drawbacks of these systems should be added to (rather than simply replacing) the existing brake condition monitoring means. The appellant's allegation of lack of inventive step of the subject-matter of claim 2 in view of a combination of D4 and D10 or D11, notably in regard to the obviousness of feature 2.9, can thus only be seen to be based on the impermissible use of hindsight of the claimed invention.

6.3.2 Moreover, and as also noted by the opposition division in the impugned decision, neither D10 nor D11 discloses that the corresponding monitoring means should be suspended when performing a single brake test, as required by feature 2.10. The appellant did not contest the lack of disclosure of feature 2.10 in these documents and the Board of its own motion can also not see that it is disclosed. The appellant rather argued

that feature 2.10 resulted from a straightforward consideration of the skilled person when using the safety device of D4 together with monitoring means as known from D10 or D11. Since the underlying premise is already based on the impermissible use of hindsight (see point 6.3.1 above), this applies all the more to the appellant's further consideration concerning feature 2.10.

6.3.3 For the subject-matter of a claim to involve an inventive step it is sufficient if only one of its features cannot be derived in an obvious manner from the prior art. This is the case at least in regard to the two features 2.9 and 2.10 considered above. Further consideration of feature 2.11 is therefore not required.

7. The further objections pursuant to Article 56 EPC against claim 2 based on D8 alone or based on D8 in combination with D10 or D11 are not admitted into the proceedings (Article 12(3) and (5) RPBA).

7.1 Article 12(3) RPBA requires the statement of grounds of appeal to *inter alia* set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the requests, facts, objections, arguments and evidence relied on.

The Board has discretion not to admit any part of a submission by a party which does not meet the requirements of paragraph 3 (Article 12(5) RPBA).

7.2 Essentially by reference to a passage in a letter submitted in the opposition procedure which led to the impugned decision, the appellant alleged in its

statement of grounds of appeal that claim 2 lacked an inventive step in regard to D8 alone or in regard to a combination of D8 with D10 or D11. The opposition division had however considered these objections in item 2.3.2 of the impugned decision and gave its reasons why they were found unconvincing. No arguments were submitted by the appellant with its statement of grounds of appeal which could have pointed out erroneous reasoning in this part of the decision. The reference to its previous letter is insufficient since the letter does not deal with the subsequent reasons given by the opposition division.

The objections based on D8 referred to in the statement of grounds of appeal are therefore not substantiated in the sense that it is not set out why this aspect of the impugned decision should be reversed.

- 7.3 Asked in the oral proceedings before the Board whether the appellant had any further comments in this regard, the appellant abstained from making any further submission.
- 7.4 In the absence of any element indicating why the decision of the opposition division on this aspect is wrong, the Board would have had to speculate why the reasoning in the impugned decision was allegedly wrong compared to the argument of the appellant provided in the opposition procedure. This is not the purpose of the appeal proceedings (see Article 12(2) RPBA). The Board consequently exercised its discretion according to Article 12(5) RPBA not to admit the objections pursuant to Article 56 EPC based on D8 alone or D8 in combination with D10 or D11.

8. The Board concludes that claims 1 and 2 meet the requirements of Article 56 EPC in regard to the prior art invoked in the appeal proceedings.

Adaptation of the description

9. The respondent did not contest the principle that adaptation of the description may be required if the patent is to be maintained with amended claims (Article 84 EPC). The Board finds that the amended description submitted before the opposition division requires further amendment so that the respondent's main request, i.e. to dismiss the appeal and to maintain the patent on the basis of the amended claims and the amended description underlying the impugned decision, cannot be allowed.

The Board agrees in particular with the appellant's argument, submitted in view of the accepted interpretation of the combined features 1.4, 1.5, 1.9, 1.11, 1.12 and 1.14 as set out in reasons 5.2.3, that the embodiment of Figure 4 of the patent is not covered by claim 1. In this embodiment, the first connector 228 which comprises the third terminal 232 does not comprise a first or second terminal for outputting the respective actuating signal (see features 1.12 and 1.14). Although the reference numbers 212 and 214, which point to the further terminal on said first connector 228 comprising the third terminal 232 in that embodiment, appear to identify a first or second terminal as indicated on the other two first connectors 224 and 226, the actual connection of this further terminal is not to the electrical line 218 by which the first and second actuating signals are provided. The further terminal on the first connector 228 is instead

connected to the ground line 236.

10. The respondent's auxiliary request (based on the claims of the main request attached to the impugned decision of 17 November 2021 and an amended description with paragraphs 1 to 91 and figures 1 to 4 of the patent specification as provided in the oral proceedings) can however be allowed. The further amendments to the description submitted during the oral proceedings before the Board remove the inconsistencies between the subject-matter of independent claim 1 and the description.

The appellant's objection that the content of paragraphs 42, 53, and 59 remained inconsistent with the subject-matter of claims 1 and 2 is unconvincing. The options mentioned in the cited paragraphs, i.e. to switch electrically and/or remotely between the two operation modes A and B (features 1.7, 1.8), thus not requiring the intervention of a service technician for unplugging and replugging the connectors of the connector arrangement, are not excluded by claims 1 or 2 (see also point 4.2 above). The question of whether the "technical problem" of "stopping the elevator if a worker forgets to re-plug the connectors permanently releasing one brake", as mentioned also in paragraph 73 of the patent, is actually solved by the features of claim 2 is entirely unrelated to the possibilities of switching between the two operational modes discussed in paragraphs 42, 53 and 59. Although not argued by the appellant, the Board adds for completeness that the content of paragraph 73 is not seen to be inconsistent with the subject-matter of claim 2.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form with the following documents:
 - claims 1 to 8 of the main request filed with the reply to the grounds of appeal,
 - description with paragraphs 1 to 91, filed during the oral proceedings before the Board of Appeal and
 - figures 1 to 4 of the patent specification.

The Registrar:

The Chairman:



D. Grundner

M. Harrison

Decision electronically authenticated