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Datasheet for the decision of 20 April 2026

Case Number: T 0967/23 - 3.5.01

Application Number: 13899570.9

Publication Number: 3083467

IPC: B66B5/00, H02M3/335

Language of the proceedings: EN

Title of invention:
SYSTEM AND METHOD FOR LIMITING OVER-VOLTAGE IN POWER SUPPLY SYSTEM

Patent Proprietor:
Otis Elevator Company

Opponent:
KONE Corporation

Headword:
Overvoltage protection/OTIS

Relevant legal provisions:
EPC Art. 54, 56, 114(2)
RPBA 2020 Art. 12, 13

Keyword:
Amendment to appeal case - (not admitted - new inventive step attack should have been filed during opposition proceedings)
Novelty - (main request - yes)
Inventive step - (main request - yes)

Decisions cited:
G 0010/91, G 0001/95, G 0007/95, T 0131/01, T 1179/17, T 1816/17, T 1042/18

Catchword:
The question of whether a fresh ground of opposition has been raised - and, therefore, of whether the agreement of the patentee is required - has to be distinguished from the question of whether there has been an amendment to a party's appeal case. The admissibility of amendments represents a separate, independent issue and is subject to the discretion of the board under Article 114(2) EPC and Articles 12 and 13 RPBA.

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Case Number: T 0967/23 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 20 April 2026

Appellant: (Opponent)	KONE Corporation Kartanontie 1 00330 Helsinki (FI)
Representative:	Glück Kritzenberger Patentanwälte PartGmbB Franz-Mayer-Str. 16a 93053 Regensburg (DE)
Respondent: (Patent Proprietor)	Otis Elevator Company One Carrier Place Farmington CT 06032 (US)
Representative:	Winter, Brandl - Partnerschaft mbB Alois-Steinecker-Straße 22 85354 Freising (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted/electronically transmitted on 18 April 2023 rejecting the opposition filed against European patent No. 3083467 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	G. Flyng
Members:	L. Falò
	E. Mille

Summary of Facts and Submissions

I. The appeal was filed by the opponent against the decision of the opposition division to reject the opposition against European patent No. 3 083 467. The decision relied, among others, on the following documents:

D1: US 6,446,760 B1
D3: CN 101752840 A
D3a: Espacenet translation of D3
D4: JP 2011-147305 A
D4a: English machine translation of D4
D6: WO 2011/053294 A1
D7: WO 2013/179324 A1

II. The appellant (opponent) filed the statement of grounds of appeal on 3 August 2023 and the respondent (patent proprietor) filed a reply thereto on 8 December 2023. The appellant filed further arguments with letter of 12 January 2024.

III. Summons to attend oral proceedings were issued on 12 November 2025 together with a communication pursuant to Article 15(1) RPBA. The patent proprietor and the opponent replied thereto with letters of 16 March 2026 and 19 March 2026, respectively.

IV. Oral proceedings before the board took place on 20 April 2026.

V. The appellant requested that the decision be set aside and that the patent be revoked.

VI. The respondent (patent proprietor) requested that the appeal be dismissed and the patent be maintained as granted (main request) or according to the set of claims of any of auxiliary requests 1 to 15 underlying the impugned decision and re-filed with the reply to the appeal dated 8 December 2023.

VII. Claim 1 of the granted patent reads as follows (feature numbering as given by the opposition division):

1.1 An elevator system (2), comprising

1.2 an elevator car (4); and

1.3 a power supply system (10) characterized in that

1.4 the power supply system (10) is configured to supply protective extra-low voltage to the elevator car (4),

1.5 the power supply system (10) having a switched mode power supply (12) configured to provide an output voltage to the elevator car (4),

1.6 a first voltage monitor (18) and a second voltage monitor (20),

1.7 the first and the second voltage monitors (18) [sic] configured to detect an over-voltage condition at the switch mode power supply (12) and turn the switch mode power supply (12) off if the over-voltage condition is detected.

Reasons for the Decision

Main request - novelty over D1

1. In the statement of grounds of appeal, the appellant argued that claim 1 of the granted patent lacked novelty over D1.

2. In the contested decision, the opposition division held that claim 1 was novel over D1 as it did not disclose at least features 1.4 and 1.7. The proprietor further argued in the statement of grounds of appeal that D1 also did not disclose feature 1.5.

3. The appellant argued that feature 1.4 was anticipated by D1, as one of the switches 3 for closing the series chain was located on the car to monitor the position of the car door (see column 1, lines 15 to 19). According to the appellant, the claimed feature "supply ... voltage to the elevator car" should not be narrowly interpreted as requiring a supply of voltage to components of the elevator car, but should also encompass the chain of switches of D1.

4. The board agrees with the contested decision (see point 10) that D1 does not disclose the feature of the power supply system supplying the elevator car with protective extra-low voltage (feature 1.4).

5. In particular, the scope of providing protected or "protective" extra low voltage to an apparatus is generally that of protecting its users from the risk of electrical shocks under normal and single-fault conditions. Hence, the expression "configured to supply

protective extra low voltage to the elevator car" indicates the supply of voltage for operating at least some of the car's components or a power outlet. The mere presence, on the elevator car, of a switch closing a circuit providing voltage to external entities (i.e. the safety relays 4, see column 2, lines 24 to 30 and Figure 1) is not sufficient to anticipate feature 1.4. Even though one of the switches 3 needed to close the series chain may be located on the car (see column 1, lines 15 to 19), an extra low voltage in the sense of feature 1.4 is only supplied to the safety relays 4. Specifically, the extra low voltage is supplied to the safety relays 4 as a potential difference compared to that of a common line (see column 2, lines 24 to 30 and Figure 1).

6. Considering feature 1.7, the board agrees with the contested decision that D1 does not disclose two voltage monitors configured "*to detect an over-voltage condition at the switch mode power supply*".

7. The appellant argued that, in specific modes of operation (i.e. when all the switches 3 are closed), the over-voltage detector 16 was connected to the output of the voltage converter via resistor 11 and thus detected an over-voltage at the voltage converter. Contrary to the findings of the opposition division, the presence of a cable and of one or more resistors between the over-voltage detector 16 and the power supply did not alter the fact that the measurement constituted a measurement of the over-voltage at the switched mode power supply. Moreover, the appellant submitted that, also in the granted patent, the over-voltage was measured downstream of a resistor (Figure 3, reference sign 34, Figure 4, reference sign 50), which further supported this interpretation. According

to the appellant, the wording of the claim was not limited to performing the measurements at the same point or under the same condition for both detectors.

8. The board finds these arguments unconvincing. As explicitly stated in D1 (column 2, lines 49 to 51), the over-voltage detector 16 detects the voltage across the safety relay 4, which is connected to the voltage converter via several switches as well the trailing cable to the elevator car. The board agrees with the appellant that, in a specific mode of operation (i.e. when all the chain switches are closed), the detector 16 provides a measurement which is dependent on the voltage converter output. However, this is not true in the general case. Even if all the switches are closed, because of the considerable length of the cables to the elevator car, the portion of circuit downstream of the voltage converter cannot be modelled as a mere voltage divider, as for example parasitic inductance and capacitance may become significant. The board further disagrees with the argument that the patent specification supports the appellant's interpretation. By comparing Figure 2 of the granted patent with Figures 3 and 4, it can be seen that the resistors 34, 36, 50, 52 are voltage-divider resistors forming part of the voltage monitors. Hence, in the patent both voltage monitors are directly connected to the output of the switched mode power supply.

9. Accordingly, the board concludes that claim 1 is novel over D1.

Main request - inventive step over D1 (admissibility)

10. The appellant argued that, even if considered novel, claim 1 would still lack an inventive step over D1 combined with common general knowledge.

11. The respondent argued that the inventive step attack based on D1 should not be admitted under Article 12(4) RPBA, as it had not been raised during the opposition proceedings and constituted an amendment to the case which had neither been expressly identified nor adequately justified in the statement of grounds of appeal.

12. The appellant submitted that according to established case law and, in particular, to decision T 131/01, an inventive step attack is admissible on appeal even if only a novelty objection was raised during opposition proceedings, because the inventive step is not considered a fresh ground for opposition.

13. According to decision T 131/01, in a case where a patent has been opposed under Article 100(a) EPC on the grounds of lack of novelty and inventive step having regard to a prior art document, and the ground of lack of novelty has been substantiated pursuant to Rule 55(c), an objection of lack of inventive step based on the same document is not a fresh ground for opposition and may consequently be examined in the appeal proceedings without the agreement of the patentee.

14. The board observes, however, that the case underlying decision T 131/01 differs from the present case at least in one respect. In particular, the arguments as to lack of inventive step filed with the statement of grounds of appeal had already been submitted by the

opponent during the opposition proceedings (see T 131/01, point 4.1). The board found that the opposition division had incorrectly exercised its discretionary power not to admit them (ibid., 4.2).

15. In the present case, by contrast, lack of inventive step starting from D1 was raised for the first time on appeal. This amounts to an amendment to the party's case within the meaning of Articles 12(2) and (4) RPBA, provisions that were not yet in force at the time decision T 131/01 was issued. This constitutes a further difference between the present case and the circumstances underlying that decision.

16. The question of whether a fresh ground of opposition has been raised - and, therefore, of whether the agreement of the patentee is required on account of the opinion G 10/91 and decisions G 1/95 and G 7/95 of the enlarged Board of Appeals - has to be distinguished from the question of whether there has been an amendment to a party's appeal case. The admissibility of amendments represents a separate, independent issue and is subject to the discretion of the board under Article 114(2) EPC and Articles 12 and 13 RPBA. This approach is consistent with the established case law of the Boards of appeal, see for example T 1042/18, Reasons 4.5; T 1179/17, Reasons 4.6.2; T 1816/17, Reasons 12.

17. Under Article 12(6) RPBA, second sentence, the board shall not admit requests, facts, objections or evidence which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.

18. In the present case, the patent proprietor's and the opposition division's position that D1 did not anticipate claim 1 was known to the opponent before the opposition oral proceedings (see e.g. annex to the summons to oral proceedings in opposition, point 2.2.1). Hence, the board takes the view that any inventive step attack based on D1 could and should have been filed at the latest during those oral proceedings. Moreover, the board cannot identify any circumstances which would justify the admission of such attack on appeal, nor did the appellant provide arguments in this respect.

19. Accordingly, the board decides not to admit the inventive step attack based on D1 into the appeal proceedings, Articles 12(4) and 12(6) RPBA.

Main request - inventive step over D6 or D7 combined with D3

20. In the statement of grounds of appeal, the appellant argued that claim 1 of the granted patent lacked inventive step over D6 or D7 in combination with document D3.

21. The opposition division found that the skilled person would not have combined the teachings of D6 and D3, as D3 did not pertain to the power supply system of an elevator, but to the AC input over-voltage of a controller chip, which involved different voltages. D3 addressed the protection of the components of the power supply itself, rather than of its output and, in case of over-voltage, turned off an internal switch rather than the power supply itself.

22. The respondent additionally argued that the system of D3 could not provide a "protective extra low voltage",

as claimed, because it monitored over-voltage at the input side and not at the output. Therefore, it could not guarantee that the voltage supplied to the downstream components was limited to a maximum of sixty volts.

23. The appellant argued that it would have been normal for the skilled person, i.e. an electronic engineer working in the field of elevators, to look for solutions in the general electronic field. In particular, during oral proceedings, the appellant argued that the objective technical problem to be solved was how to improve protection. As this was a general electrotechnical problem, the skilled person would consider any general AC/DC power source system offering protection and, therefore, would consider D3. In paragraph [0004] of D3 it was stated that the power supply of D3 was intended for medium and high power levels. The voltages mentioned in paragraph [0008] (3.3V, 1.8V) related to the protection of the voltage of a controller chip, i.e. a specific component of the power supply, but this did not limit the output of the power supply. A combination of D6 with D3 disclosed all the features of claim 1, because the provision of an over voltage protection according to document D3 automatically changed the extra-low-voltage of D6 to a protective extra low voltage in line with feature 1.4.

24. The board agrees with the appellant in so far as that the voltages disclosed in D3 are the operating voltages of the controller chip and, therefore, do not limit the application of the disclosed device to a particular voltage range, see for example D3, paragraph [0008].

25. However, the board considers the problem formulated by the appellant ("how to improve protection") too broad.

In view of the differentiating features of the claim as well as of the general teaching of the patent, the objective technical problem solved is more specific, i.e., how to improve protection of the elevator car and/or of its users.

26. The skilled person, starting from D6 and faced with the above technical problem, would not consider the disclosure of D3 to be relevant. D3 is concerned solely with the protection of a generic power source itself, not with the protection of loads fed by the power source. Hence, it addresses a different technical problem.

27. For the same reasons, the skilled person would not combine the disclosure of D7 with that of D3.

Main request - Inventive step over the combination of D6 or D7 with D4.

28. The board agrees with the opposition division that the skilled person would not combine the teachings of D6 or D7 with those of D4.

29. The appellant argued that the contested patent was not just in the field of elevators but dealt with the more general topic of over-voltage protection for power supply systems, as made clear by its title. Even though claim 1 specified that the power was intended for an elevator car, the skilled person would look for solutions also in other technical fields in which the same problem arose. Moreover, the solution as such was not specific to elevators but was more generally in the "electronic" field.

30. The board finds this argument unconvincing. The technical field of a patent or patent application is not defined by its title, but by the claims when construed in the light of the specification as a whole.

31. The contested patent clearly concerns the field of elevator power supply systems, see claim 1, which is directed to an elevator system comprising an elevator car and a power supply system, and for example the sections "Field of the disclosure", paragraph [0001], "Background of the disclosure", paragraphs [0002] to [0004].

32. D4, by contrast, concerns power converters for vehicles (see e.g. paragraph [0001] of the translation), which is a quite remote technical field.

33. The skilled person, starting from the elevator systems of D6 or D7, would therefore have no reason to consider D4 as potentially relevant for protecting an elevator installation and/or its users.

Conclusion

34. Since none of the objections brought forward by the appellant and admitted by the board prejudices the maintenance of the patent as granted, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero G. Flyng

Decision electronically authenticated