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Case Number: T 1935/11 - 3.2.06

Application Number: 06794088.2

Publication Number: 1931587

IPC: B66B1/30, B66B5/02

Language of the proceedings: EN

Title of invention:
ELEVATOR CONTROL SYSTEM FOR REGENERATIVE POWER

Patent Proprietor:
Kone Corporation

Opponent:
Otis Elevator Company

Headword:

Relevant legal provisions:
EPC Art. 54

Keyword:
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Catchword:

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Case Number: T 1935/11 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 18 April 2016

Appellant: (Opponent)	Otis Elevator Company Ten Farm Springs Road Farmington, CT 06032-2568 (US)
Representative:	Klunker . Schmitt-Nilson . Hirsch Patentanwälte Destouchesstraße 68 80796 München (DE)
Respondent: (Patent Proprietor)	Kone Corporation Kartanontie 1 00330 Helsinki (FI)
Representative:	Glück Kritzenberger Patentanwälte PartGmbB Hermann-Köhl-Strasse 2a 93049 Regensburg (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 4 July 2011 concerning maintenance of the European Patent No. 1931587 in amended form.**

Composition of the Board:

Chairman	M. Harrison
Members:	T. Rosenblatt
	W. Ungler

Summary of Facts and Submissions

I. The appellant (opponent) filed an appeal against the interlocutory decision of the opposition division, posted 4 July 2011, in which the opposition division found that European patent No. 1 931 587 in an amended form met the requirements of the EPC.

II. Claim 1 of the amended set of claims found allowable by the opposition division corresponds to claim 1 as granted, and has the following wording:

"1. Elevator system (24), which elevator system (24) is connected to the electricity distribution network (4) of the building, which can further be connected either to the public electricity distribution network (7) or to a reserve power appliance (2), and which elevator system (24) comprises at least one elevator (8), an elevator control system (34), an elevator motor (28), a frequency converter (26) fitted to supply the elevator motor (28), and which elevator system (24) can be used both when the electricity network (4) of the building is connected to the public electricity distribution network (7) and when the electricity network (4) of the building is connected to a reserve power appliance (2), **characterized** in that the elevator system (24) comprises means for controlling the elevators (8) such that when the electricity network (4) of the building is connected to the reserve power appliance (2) the power supplied by the elevator system (24) towards the electricity network does not exceed the presettable power limit P_a."

III. The appellant requested that the patent be revoked and relied in its submissions *inter alia* on document

D2: EP-B-0 794 919.

IV. In a communication sent in preparation for the oral proceedings, the Board informed the parties of its preliminary opinion in the case. Concerning an objection raised under Article 100(c) EPC, the Board *inter alia* gave an interpretation of the term "presettable" and further noted, in regard to a novelty objection raised in view of D2, that if the Board's provisional interpretation of this term were to be confirmed, the subject-matter of claim 1 would appear to lack novelty.

V. Oral proceedings were held before the Board on 18 April 2016, in the course of which the respondent withdrew its auxiliary requests 1 to 4 previously submitted with the reply to the appeal grounds.

VI. The appellant requested that the decision under appeal be set aside and the patent be revoked.

VII. The respondent requested that the appeal be dismissed.

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

The application as filed did not contain any indication that the power limit was set at some specific point in time, such as at the start of operation of the system, or that it was a fixed, unvariable value throughout the operation of the system. The term "presettable" in granted claim 1 should thus have the same meaning as the term "settable". Otherwise, should there be any other more specific meaning to be attributed to this expression, as was done by the opposition division when

deciding on inventive step, it would constitute added subject-matter.

The subject-matter of claim 1 lacked novelty in view of the embodiment disclosed in D2 at paragraph 39 in combination with e.g. Figure 4.

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

During the oral proceedings it was stated that the expression "presettable" meant that the power limit was set before a comparison was made and would therefore have the same meaning in the present case as the expression "settable" as long as it was understood that this also meant that it included a setting that occurred in advance of the comparison.

Paragraph 39 of D2 did not disclose that the elevator system generated the excess power. Rather this passage had to be read in light of the complete teaching of D2 which related to a reserve power system. The excess power was primarily generated by the reserve power generator due to transient power peaks occurring for example at generator start-up or with unreliable generator or network equipment. Power generated by the elevator system was irrelevant in this respect.

The respondent also argued (solely in the written submissions) that paragraph 39 did not disclose setting of a power limit for the total net power fed by the elevator system to the building network. Rather, according to this paragraph, the elevator's motor speed was reduced when an imbalance in power was measured, i.e. when the total network power, which would then

equal generated power minus consumed power, became positive.

Reasons for the Decision

1. Interpretation of claim 1

In the context of an objection raised by the appellant under Article 100(c) EPC, it had to be considered whether the expressions "presettable power limit", used inter alia in claim 1, and "power limit that can be set for it" as found in original claim 1, had a different meaning especially conferred by the prefix "pre-" and consequently how the term "presettable" would be understood by the skilled person in the present case.

In the communication issued in preparation for the oral proceedings the Board expressed its preliminary view that the term "presettable" used in claim 1 appeared to mean that the power limit had to be set at least prior to the (implicitly defined) comparison, without seemingly excluding that it could be modified later (point 1.1.3 of the Board's communication).

It further appeared that the action of setting was disclosed in the description of the application underlying the patent in suit to the same degree of generality as defined in the claims, i.e. without reference to a particular point in time, except that it had to be effected before a comparison could be carried out, and without excluding that it may be changed or adjusted (point 1.1.4 of the Board's communication).

This understanding of the term "presettable" was also not contested by the parties.

The Board thus has no reason to deviate from the interpretation given in its preliminary opinion, i.e. the term "presettable power limit" refers to a power limit which has to be set at some point before a comparison is carried out, without excluding that it can be changed or adjusted.

2. Article 54 EPC

The subject-matter of claim 1 lacks novelty in view of D2 (Article 54(1) and (2) EPC).

2.1 D2 discloses in Figure 4 in combination with paragraphs 34 to 43, an embodiment of an elevator system (42) according to the preamble of claim 1. This has been stated in the impugned decision and had not been contested by the respondent. The Board also finds no reason to reach a different conclusion.

2.2 The respondent contests however that the feature in the characterising portion of claim 1 is disclosed in paragraph 39 of the description of this embodiment.

2.3 Its arguments are not accepted for the following reasons.

2.3.1 The normal consistent and consequential reading of paragraphs 38 to 39 contradicts the respondent's interpretation of paragraph 39 according to which its content related to the subject-matter of D2 in general, i.e. to a reserve power system comprising *inter alia* the reserve power generator and the elevator system, so that the excess generated power mentioned there would consequently be that generated by the reserve power generator or that which could not be consumed in the

network due to other unreliable or transient operation states of the entire system. Although the Board finds that the respondent is correct in stating that D2 relates in general to a reserve power system, comprising a reserve power generator and an elevator system, and particularly to the distribution of power from the reserve power generator to the elevator system, paragraph 39 however, read in the context of the preceding paragraph, refers to the situation where power generated by the elevators is fed to the building network.

Preceding paragraph 38 describes the operation of an elevator motor as a power generator (col. 9, l. 38) and considers its power consumption relative to its nominal power as a function of motor speed and power dissipated by the motor and how much of the elevator generated power can be fed into the network (col. 9, l. 45, 49). It concludes that elevator motors run at a speed higher than some limit speed generate energy for other elevators whereas those run below that speed limit consume energy.

The first sentence of subsequent paragraph 39 reads: "If during operation there occurs a situation where more power is generated than can be consumed by the devices in the building, it is possible to operate the elevator motor at zero speed under control of the frequency converter."

Reading this sentence as referring to excess power generated by the reserve power generator would be in contradiction to the normal consistent and consequential reading of the whole text. No reference is made here or in the following lines of this paragraph to the reserve power generator. Transient

states of the reserve power generator or the entire system leading to power peaks constituting excess power are also nowhere mentioned in the description and would not appear to come immediately to the mind of the skilled person when reading this sentence in its context.

2.3.2 Even if, for the sake of argument, the first sentence of paragraph 39 would, taken alone, be considered in some way ambiguous in regard to the source responsible for the generation of excess power, then the final sentence in paragraph 39 removes any remaining doubt on this issue since the elevators generating power are explicitly mentioned there (col. 10, l. 13).

2.3.3 The Board further considers that the comparison necessarily performed in the situation referred to in the first sentence of paragraph 39 implies for the skilled person that a limit value for the power has to be set in advance of such comparison, irrespective of whether or not it may be changed later on. This limit corresponds to the actual consumed power of the devices in the building's network and in terms of claim 1 thus to the "presettable power limit P_a" (cf. point 1 above).

Interpreting the situation mentioned in paragraph 39 as describing a "power imbalance" where the difference between generated power (P_{gen}) and consumed power would have to be calculated and then checked whether this difference is greater or smaller than zero, does not change the conclusion already reached. It would still imply a limit value or presettable power limit Pa which corresponds to the consumed power. The only difference in terms of its implementation in a controlling means of an elevator system would be that the controlling

means would have to evaluate either an expression "(P_{gen}-P_a) > 0" or the equivalent expression "P_{gen} > P_a". However, claim 1 does not define how the comparison implied by the feature "the power supplied ... does not exceed the presettable power limit P_a" is actually carried out in the controlling means.

In terms of technical features of a system, no difference can be seen between the feature of claim 1 "does not exceed the presettable power limit" and the features derivable unambiguously from the statement in paragraph 39 "where more power is generated than can be consumed". The skilled person would also not understand the feature of claim 1 as totally excluding any occurrence of an excess power situation, i.e. where the generated power due to some unforeseen failure of devices in the network exceeds the power limit P_a.

2.3.4 Paragraph 39 also discloses that in order to avoid an excess-power in the electricity network of the building, the elevators are controlled to be driven either at zero or reduced speed (col. 10, l. 9, 15).

2.4 From the foregoing, the Board thus concludes, contrary to the respondent's argument, that paragraph 39 of D2 discloses also the feature in the characterising portion of claim 1, namely that "the elevator system (42) comprises means for controlling (which is implicit and also not contested by the respondent, comprising *inter alia* means 26, 50, 46 and the monitoring means referred to in, for example, paragraph 36) the elevators such that when the electricity network of the building (col. 10, line 8) is connected to the reserve power appliance (2) the power supplied by the elevator system (42) towards the electricity network does not

exceed the presettable power limit P_a (power consumed)".

3. Since the subject-matter of claim 1 of the respondent's sole request lacks novelty, the patent cannot be maintained in this form.

4. Since claim 1 does not meet the requirement of Article 54 EPC, it is not necessary to give a reasoned decision on the other objections raised by the appellant, such as the one briefly mentioned above in regard to Article 100(c) EPC which the Board concluded in oral proceedings was not prejudicial to maintenance of the patent.

5. In the absence of an allowable request, the patent has to be revoked according to Article 101(3)(b) EPC in conjunction with Article 111(1) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. H. A. Patin M. Harrison

Decision electronically authenticated