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**Datasheet for the decision
of 20 April 2023**

Case Number: T 0760/21 - 3.5.02

Application Number: 10818469.8

Publication Number: 2480475

IPC: H02K11/215, B66B1/34, H02K7/10

Language of the proceedings: EN

Title of invention:
Hoisting machine and elevator system

Patent Proprietor:
Kone Corporation

Opponent:
thyssenkrupp Elevator AG

Relevant legal provisions:
EPC Art. 123(2), 123(3)

Keyword:
Amendments - main request - extension beyond the content of
the application as filed (yes) - auxiliary request II -
extension of the scope of protection conferred (yes)

Decisions cited:
G 0001/93



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Case Number: T 0760/21 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 20 April 2023

Appellant: Kone Corporation
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 27 November
2020 revoking European patent No. 2480475
pursuant to Article 101(3) (b) EPC.**

Composition of the Board:

Chairman R. Lord
Members: H. Bronold
A. Bacchin

Summary of Facts and Submissions

- I. The appeal of the patent proprietor is against the decision of the opposition division revoking European patent No. 2 480 475.

- II. The opposition division arrived at the conclusion that claim 1 according to the main request as filed with letter of 7 May 2019 contravened Article 123(2) EPC because there was no direct and unambiguous disclosure for the amendment in feature 1.2 "by means of a rotor" in the original application. The same applied for the auxiliary requests pending before it. The opposition division further stated that a deletion of the unallowable feature would extend the scope of protection, contrary to Article 123(3) EPC.

- III. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained in amended form according to the main request as filed with letter of 7 May 2019 or, in the alternative, that the patent be maintained in amended form according to auxiliary request II, filed with their statement setting out the grounds of appeal. The appellant also requested that the case be remitted to the opposition division if objections were to be discussed going beyond those addressed in the board's communication under Article 15(1) RPBA.

- IV. The respondent (opponent) requested that the appeal be dismissed. Moreover, the respondent requested that auxiliary request II not be admitted into the appeal proceedings.

V. Claim 1 according to the main request reads as follows:

"An electric hoisting machine, whose rotating part comprises a hollow drive sheave (6) rotatably mounted on a body part (33) of the hoisting machine by means of a rotor (3);

and which hoisting machine is provided with a drive-sheave protection plate (28) being secured to the body part (33) of the hoisting machine and extending to the side of the drive sheave (6), so that the drive sheave (6) is housed in a space remaining between the protection plate (28) and the body part (33); wherein the hoisting machine is provided with a measuring arrangement for the measurement of the position and/or movement of the rotor (3), comprising a magnetic band (4) being fitted inside the hollow drive sheave (6), so that the magnetic band (4) is fitted to revolve about a rotational axis (7) of the rotor (3) and having at least two parallel channels (10A, 10B), each one of said channels containing successive portions (5A, 5B; 6A, 6B) following each other in the longitudinal direction of the band, and that different parallel channels differ from each other in respect of the disposition and/or frequency of occurrence of the said successive portions (5A, 5B; 6A, 6B) following each other, the magnetic property of said magnetic band (4) being so implemented that it varies in the longitudinal direction of the band (4) essentially sinusoidally, wherein the measuring arrangement (1) comprises a reader (8) which senses the aforesaid magnetic property varying in the longitudinal direction of the magnetic band, said reader (8) being fitted in conjunction with the drive-sheave protection plate (28) in the immediate vicinity of the magnetic band (4)."

VI. Claim 1 according to auxiliary request II reads as follows:

"An electric hoisting machine comprising a permanent-magnet synchronous motor, whose rotating part of the machine comprises a hollow drive sheave (6) rotatably mounted on a body part (33) of the hoisting machine by means of a bearing (27)

- that is mounted in a bearing housing integrated in the same body with the drive sheave by being fitted inside the hollow drive sheave,

- and that is supporting the drive sheave on the body part (33) along with a rotor (3) that is integrated with the drive sheave, wherein an air gap between the rotor and a stator is substantial [sic] parallel to the rotational axis (7) of the rotor;

and which hoisting machine is provided with a drive-sheave protection plate (28) being secured to the body part (33) of the hoisting machine and extending to the side of the drive sheave (6), so that the drive sheave (6) is housed in a space remaining between the protection plate (28) and the body part (33); wherein the hoisting machine is provided with a measuring arrangement for the measurement of the position and/or movement of the rotor (3), comprising a magnetic band (4) being fitted inside the hollow drive sheave (6) so that the magnetic band (4) is fitted to revolve about the rotational axis (7) of the rotor (3) and having at least two parallel channels (10A, 10B), each one of said channels containing successive portions (5A, 5B; 6A, 6B) following each other in the longitudinal direction of the band, and that different parallel channels differ from each other in respect of the disposition and/or frequency of occurrence of the said successive portions (5A, 5B; 6A, 6B) following each other, the magnetic property, namely the intensity of

said magnetic band (4) being so implemented that it varies in the longitudinal direction of the band (4) essentially sinusoidally, wherein the measuring arrangement (1) comprises a reader (8) which senses the aforesaid magnetic property varying in the longitudinal direction of the magnetic band, said reader (8) being fitted in conjunction with the drive-sheave protection plate (28) in the immediate vicinity of the magnetic band (4)."

- VII. The arguments of the parties which are of particular relevance for the decision are detailed below together with the reasons for the decision.

Reasons for the Decision

1. Admissibility of the appeal - Article 108 EPC and Rule 99(2) EPC

The appeal was filed in due form and time and sufficiently substantiated. Therefore, the appeal is admissible.

2. Main request - Article 123(2) EPC

Feature 1.2 - "by means of a rotor"

- 2.1 Claim 1 according to the main request contravenes Article 123(2) EPC.

Regarding inadmissible amendments it was disputed *inter alia* whether the amendment "by means of a rotor" in claim 1 of the main request extends beyond the content of the application as filed in the sense of Article 123(2) EPC.

The board does not deviate from the contested decision in this respect. As argued by the opposition division and by the respondent, there is no basis in the originally filed application for the disputed amendment in feature 1.2 of granted claim 1.

The board is consequently not convinced by the appellant's arguments regarding original disclosure of disputed feature 1.2.

2.2 The appellant argued on the one hand that the opposition division's argument why claim 1 contravened Article 123(2) EPC did not correspond to the one raised by the opponent.

The board notes in this respect that point 4.9 of the contested decision, cited by the appellant in their grounds of appeal as being the reason why the opposition division allegedly arrived at the conclusion that claim 1 according to the main request was inadmissibly amended, merely provides reasons why the opposition division was not convinced by the corresponding arguments presented by the proprietor.

The reason why the opposition division had reached its conclusion is given in point 4.10 of the contested decision instead, where it is stated that "the division cannot establish a direct and unambiguous basis in the application as originally filed for the mounting of the drive sheave on a body part of the hoisting machine by means of a rotor." (emphasis added by the board). In points 4.7 and 4.9 of the decision, the opposition division merely provides counter-arguments to the proprietor's first and second lines of defence against the corresponding objection as raised by the opponent.

2.3 Further, the appellant essentially repeated the two lines of arguments already presented during the proceedings before the opposition division.

The first line of argument is that there is support for the contested feature because "the rotor participates for the rotation of the sheave relative to the body" wherein "further elements aiding to be rotatably

mounted" were not excluded. These further elements could, according to the appellant, include a bearing.

The second line of argument is that because claim 1 contained the feature that "the magnetic band is fitted inside the hollow drive sheave", figure 2 had to be taken into account for the interpretation of claim 1. Figure 2 showed an integral structure of drive sheave and rotor and "thus also discloses that the drive sheave is rotatably mounted ... by means of the rotor".

- 2.4 As already pointed out above however, the board does not deviate from the finding in the contested decision that there is no direct and unambiguous basis in the original application for the feature that the drive sheave is rotatably mounted by means of a rotor.
- 2.5 The appellant's first line of argument merely relates to the fact that the rotor can provide rotation to the drive sheave. In the board's view this fact is on the one hand uncontested and on the other hand it contains no technical information regarding the question how the drive sheave is mounted on the body of the hoisting machine. Whether or not the rotor actually can provide rotation to the drive sheave is not even covered by the wording of claim 1. Claim 1 merely defines that the drive sheave is rotatably mounted by means of a rotor. Further, the definition that the drive sheave is rotated by the rotor does not in any way specify how the drive sheave is mounted to the body of the hoisting machine. The appellant's first line of argument thus does not convince the board.
- 2.6 The second line of argument is based on the fact that the drive sheave and the rotor are formed as an integral structure. While this may be derivable from

the original application and in particular from figure 2, the board cannot identify any aspect in this fact related to the mounting of the drive sheave relative to the body of the hoisting machine in the second line of defence either. In figure 2 the rotor is shown to be more distant in a radial direction from the bearing such that it is not conceivable for the board how this radially outer rotor should be able to contribute anything to the mounting of the radially inner drive sheave relative to the even further inward body part of the hoisting machine holding the bearing.

What figure 2 discloses in this aspect is that the drive sheave is rotatably mounted by means of bearings and that the rotor is integrally formed with the drive sheave. These two aspects are however not correlated in a technical sense. Figure 2 contains no information that it is the rotor providing any function related to the mounting of the drive sheave.

2.7 The appellant's arguments regarding the highlighted figure 2 filed with letter dated 3 April 2023 does not convince the board that the rotor is actually involved in the rotatable mounting of the drive sheave either. Firstly, the line of separation between the rotor and drive sheave that the appellant has drawn into figure 2 is not based on any part of the original application. Secondly, there are no factual reasons apparent to the board why the person skilled in the art should separate the rotor and the drive sheave, which according to the original disclosure are integrally formed (see page 9, lines 14 and 15 of the international publication WO 2011/036348 A1) in a manner exactly as suggested by the appellant. Thirdly, even if it were assumed that rotor and drive sheave were separated as indicated by the appellant, it is still immediately evident, even from

that highlighted figure, that the bearings 27 provide the rotational mounting of both the drive sheave and the rotor. The rotor does not contribute at all to the rotatable mounting. It may be assumed that the rotor is suitable for driving and thus rotating the drive sheave. This is however neither claimed, as correctly argued by the respondent, nor contested, nor decisive for the question how the rotatable mounting of the drive sheave is realised.

2.8 Thus, the board concludes that claim 1 according to the main request extends beyond the content of the application as filed and thus contravenes Article 123(2) EPC. The main request is thus not allowable.

3. Auxiliary request II - Article 123 (3) EPC

Deletion of feature 1.2 - "by means of a rotor"

3.1 Claim 1 according to auxiliary request II contravenes Article 123(3) EPC.

3.2 Claim 1 according to auxiliary request II has been amended *inter alia* by replacing "by means of a rotor" with "by means of a bearing". The disputed feature "by means of a rotor" had already been introduced into claim 1 as granted and therefore contributes to the protection conferred by the patent in the sense of Article 123(3) EPC. Therefore, it may only be replaced if such replacement does not extend the protection conferred by the patent.

3.3 The appellant argued that in accordance with the decision of the Enlarged Board of Appeal G 1/93 it was allowable to replace an inadmissible extension by a

wording as originally disclosed that does not broaden the scope of protection and that does not mean deleting the attacked feature. However, the appellant provided no arguments as to why replacing "by means of a rotor" with "by means of a bearing" would not mean deleting the feature leading to the inadmissible extension in the sense of G 1/93 and why the scope of protection was not broadened thereby.

- 3.4 The board is not convinced that the amendments carried out in auxiliary request II comply with the principles set out in G 1/93. In particular, by replacing the expression "by means of a rotor" with "by means of a bearing" in claim 1 according to auxiliary request II, the feature that the rotor provides the rotational mounting of the drive sheave has been deleted from the claimed subject-matter, without there being a basis in the application as filed for such a deletion. This is contrary to the principles established in G 1/93, since the deletion of the limiting feature that the drive sheave is rotatably mounted "by means of a rotor" extends the scope of protection conferred by the patent.
- 3.5 The appellant has not argued why the expression "by means of a bearing" could be interpreted as still including the granted feature that the drive sheave is rotatably mounted "by means of a rotor" and there are no reasons apparent to the board why this should be the case.
- 3.6 Consequently, the board agrees with the respondent that there is no possibility to overcome the inadmissible amendment of claim 1 as granted without violating Article 123(3) EPC. The board has thus arrived at the

conclusion that claim 1 according to auxiliary request II contravenes Article 123(3) EPC.

3.7 Thus, auxiliary request II is not allowable either, and the question raised by the respondent, whether auxiliary request II is admissible, can be left unanswered.

4. Conclusion

Both of the objections discussed above were addressed in the board's communication under Article 15(1) RPBA, so that the condition for the appellant's remittal request does not arise.

Since none of the appellant's requests is allowable, the board accedes to the respondent's request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

R. Lord

Decision electronically authenticated