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**Datasheet for the decision
of 13 June 2024**

Case Number: T 1168/22 - 3.5.02

Application Number: 14896857.1

Publication Number: 3166208

IPC: H02K1/32, H02K17/16

Language of the proceedings: EN

Title of invention:

Rotor, electric motor, compressor, and fan

Patent Proprietor:

Mitsubishi Electric Corporation

Opponent:

Valeo Equipements Electriques Moteur

Relevant legal provisions:

EPC Art. 100(c), 123(2)

RPBA 2020 Art. 13(2), 13(1)

Keyword:

Grounds for opposition - extension of subject-matter (yes)

Amendment to appeal case - arguments regarding auxiliary requests 1 to 19 - justification by party (no)

Amendments - auxiliary requests 1 to 19 - extension beyond the content of the application as filed (yes)

Amendment after summons - auxiliary requests 20 to 29 - prima facie not overcoming pending objections (yes)



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Case Number: T 1168/22 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 13 June 2024

Appellant: Mitsubishi Electric Corporation
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Representative: Valeo Powertrain Systems
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 28 February
2022 revoking European patent No. 3166208
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman R. Lord
Members: H. Bronold
J. Hoppe

Summary of Facts and Submissions

- I. The appeal of the patent proprietor (appellant) is against the decision of the opposition division revoking European patent No. 3 166 208.

The opposition division *inter alia* reached the conclusion that the ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent and that all auxiliary requests pending before it contravened Article 123(2) EPC.

- II. The appellant requested with their statement setting out the grounds of appeal as main request that the decision under appeal be set aside and that the patent be maintained as granted, or if that was not possible that the patent be maintained in amended form on the basis of one of their auxiliary requests 1 to 14 filed together with the statement setting out the grounds of appeal.
- III. The opponent (respondent) requested in their reply to the appeal that the appeal be dismissed, and further that auxiliary requests 7 to 9 not be admitted into the appeal proceedings, and that the case be remitted to the opposition division if the board determined that any of the auxiliary requests meets the requirements of Article 123(2) EPC.
- IV. With letter dated 20 January 2023, the appellant filed new arguments and additionally requested that the patent be maintained in amended form on the basis of one of their auxiliary requests 15 to 19 filed with that letter and presented three questions for referral

to the Enlarged Board of Appeal in the course of the interpretation of feature 1.14 of granted claim 1.

- V. In a communication under Article 15(1) RPBA the board informed the parties *inter alia* that it preliminarily considered the ground for opposition under Article 100(c) EPC to prejudice the maintenance of the patent because feature 1.10 of claim of the granted patent seemed to be inadmissibly amended. The same reasoning seemed to apply under Article 123(2) EPC to auxiliary requests 1 to 19.
- VI. With letter dated 3 May 2024, the appellant presented new submissions and additionally requested that the patent be maintained in amended form on the basis of one of their auxiliary requests 20 to 29 filed with that letter.
- VII. During the oral proceedings before the board, the respondent additionally requested that the new submissions presented during the oral proceedings and filed by the appellant with their letters dated 20 January 2023 and 3 May 2024 as well as auxiliary requests 15 to 19 filed with letter dated 20 January 2023 and auxiliary requests 20 to 29 filed with letter dated 3 May 2024 not be taken into account.
- VIII. Claim 1 of the main request according to the feature analysis used in the contested decision reads as follows:
- 1.1 : "A rotor (10) that is connected to a shaft member (40), rotates about a central axis, and is used for an electric motor (100), the rotor comprising:"
- 1.2 : "a rotor core (11) having a"

1.3 : "shaft hole (13) in which at least a part of the shaft member that rotates about the central axis is disposed; and"

1.4 : "a plurality of flow paths (50) disposed around the shaft member and penetrating the rotor in a direction parallel with the central axis, wherein each of the flow paths has an inner surface including:"

1.5 : "a first surface (51) facing outward in a radial direction of the shaft member;
a second surface (52) disposed outward of the first surface in the radial direction and facing the first surface with a clearance between the first surface and the second surface;
a third surface (53) connecting one end of the first surface and one end of the second surface in a rotational direction about the central axis; and
a fourth surface (54) connecting another end of the first surface and another end of the second surface in the rotational direction,"

1.6 : "each of the flow paths includes:
a first corner (61) connecting the first surface and the third surface;
a second corner (62) connecting the first surface and the fourth surface;
a third corner (63) connecting the second surface and the third surface; and
a fourth corner (64) connecting the second surface and the fourth surface,"

1.7 : "the shaft hole has an inner surface including: a connection region (15) connected to an outer surface (41) of the shaft member; and a non-connection region

(16) disposed with a clearance between the outer surface of the shaft member and the non-connection region,

1.8 : "wherein the first surface (51) is disposed on the shaft member (40) the second surface (52), the third surface (53), and the fourth surface (54), are disposed on the rotor core (11),"

1.10: "the first corner (61) is disposed at a border between the connection region of the rotor core (11) and the third surface (53) of the non-connection region, the second corner (62) is disposed at a border between the connection region of the rotor core (11) and the fourth surface (54) of the non-connection region, characterised in that"

1.12: "a condition $C < D$ is satisfied, where a distance from the one end of the first surface to the another end of the first surface is C , and a distance from the one end of the second surface to the another end of the second surface is D and in that"

1.13: "the first corner (61) at the border between the connection region and the third surface (53) includes a curved surface, and the second corner (62) at the border between the connection region and the fourth surface (54) includes a curved surface,"

1.14: "so that there is roundness in the first corner (61) and in the second corner (62)."

IX. In claim 1 according to auxiliary requests 10 to 19 *inter alia* the following feature has been added before feature M1.10 in comparison to claim 1 of the main request:

"the rotor (10) has recessed portions (17) formed in the inner surface (14) of the shaft hole (13), the recessed portions (17) are recessed from the inner surface (14) of the shaft hole (13) outward in the radial direction, the non-connection region (16) includes an inner surface of the recessed portions (17), each of the flow paths (50) is defined by the shaft member (40) and the recessed portions (17) disposed at the shaft hole (13) in the rotor core (11), the shaft member (40) is supported by the connection region (15) of the shaft hole (13),"

X. The final requests of the parties were as follows:

The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as granted (main request), or as an auxiliary measure that the patent be maintained in amended form on the basis of one of

- auxiliary requests 1 to 14, filed with the statement setting out the grounds of appeal or
- auxiliary requests 15 to 19, filed with letter dated 20 January 2023, or
- auxiliary requests 20 to 29 filed with letter dated 3 May 2024.

In the letter dated 20 January 2023 the appellant also presented three questions for referral to the Enlarged Board of Appeal.

The respondent (opponent) requested that the appeal be dismissed, that auxiliary requests 7 to 9 and 15 to 29 not be admitted into the appeal proceedings, that the new arguments filed with letters dated 20 January 2023 and 3 May 2024 not be admitted into the appeal proceedings, and that the case be remitted to the opposition division if the board determines that any of the auxiliary requests meets the requirements of Article 123(2) EPC.

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

Reasons for the Decision

Main request - Article 100(c) EPC

1. Feature 1.10

1.1 Regarding feature 1.10 there was dispute whether the definition in claim 1 extends beyond the content of the application as filed.

1.2 The respondent argued that whereas in original paragraph [0032] of the description and according to original figure 8,

"The first corner 61 is located between the one end of the first surface 51 in the rotational direction and an inward end of the third surface 53 in the radial direction. The second corner 62 is located between the other end of the first surface 51 in the rotational direction and an inward end of the fourth surface 54 in the radial direction",

feature 1.10 merely defined the first corner and the second corner with respect to the connection region 15, which was different from the original disclosure. Moreover, according to the original disclosure, the connection region 15 belonged to the rotor core whereas the first surface 51 belonged to the shaft member, which was evident from figure 8.

- 1.3 The board agrees with the respondent in this respect. The appellant's corresponding arguments presented in writing that the entirety of features 1.4 to 1.10 left no doubt that the first corner was disposed between the first surface and the third surface and between the connection region and the non-connection region, and that there was no contradiction between these different descriptions, do not convince the board. As argued by the respondent, feature 1.10 defines the first and second corners with respect to the connection region instead of the first, third and fourth surfaces and the radial and circumferential directions as disclosed in paragraph [0032] and figure 8. Moreover, for assessing whether the claimed subject-matter is originally disclosed, it was not enough that it does not contradict the original disclosure, rather it needs to be disclosed clearly and unambiguously. The appellant's arguments are based on the content of the figure 4. The board notes, that the claimed subject-matter is in no way limited to the graphical representation presented in figure 4. Moreover, as correctly argued by the respondent, figure 4 relates to paragraph [0032] whereas the claimed subject-matter relates to the embodiment shown in figure 8.
- 1.4 In their letter dated 3 May 2024 and during the oral proceedings before the board the appellant presented new submissions regarding feature 1.10.
- 1.5 The respondent requested not to take the new submission regarding feature 1.10 into account in the appeal proceedings.
- 1.6 The board notes, that the question of whether the appellant's new submissions are to be taken into account can be left open, because even taking the

appellant's new submissions into account, the board reached the conclusion that feature 1.10 extends beyond the content of the application as filed.

1.7 In particular, the appellant argued that the basis for feature 1.10 was to be found in figure 8 and paragraph [0032] and that the feature was also shown in figures 1 and 3 to 9. Further, the appellant considered paragraph [0032] structurally equivalent to or at least implied by feature 1.6 in conjunction with other parts of the claim, in particular feature 1.5. In the context of these additional features the content of the claim was exactly the same since the location of the corners was only described by different features but remained identical. From features 1.5 and 1.6 it followed logically that the first corner was located between the one end of the first surface in the rotational direction and an inward end of the third surface in the radial direction. This reasoning applied similarly to the other corners. It was further admissible to use a figure as a basis for disclosure, even without including all features of the figure in a claim. The fact that the connection region 15 belonged to the rotor core whereas the first surface belonged to the shaft member did not give rise to undisclosed matter or an inconsistency or contradiction between the claimed features and the description or the drawings. Further, the passages describing the embodiments in the patent were consistent with each other, and merely the differences between the embodiments were described, such that for example the teaching of figure 4 also applied to figure 8.

1.8 The appellant's new submissions do not convince the board either. Firstly, equivalence of a claimed feature with parts of the original disclosure is not sufficient

to provide for such a feature a direct and unambiguous disclosure according to the so-called gold standard (see G 2/10, reasons 4.3).

- 1.9 Even assuming that, as argued by the appellant, equivalence means structural equivalence, the board does not agree with the appellant that the allegedly equivalent definition provides a direct and unambiguous disclosure.

In the present case, taking for example feature 1.6 cited by the appellant in this context into account, it is evident that feature 1.6 refers to first, second, third and fourth corners of the flow paths because features 1.6 starts with "*each of the flow paths includes:*". Similarly, feature 1.5 also cited by the appellant is connected to feature 1.4 and therefore refers to first, second, third and fourth surfaces of the flow paths. Feature 1.10 however, contains definitions of the first and second corners referring to the connection region of the rotor core, the non-connection region of the rotor core, the third surface of the rotor core, and the fourth surface of the rotor core.

- 1.10 The appellant also argued that it followed logically that the first corner was located between the one end of the first surface in the rotational direction and an inward end of the third surface in the radial direction as defined in paragraph [0032], with similar reasoning applying to the other corners.

- 1.11 This argument however implies that the non-connection region is identical to the first surface of the flow paths, that the third surface of the non-connection region is identical to the third surface of the flow

paths and that the fourth surface of the non-connection region is identical to the fourth surface of the flow paths. It further implies, as argued by the appellant during the oral proceedings before the board, that the radial direction mentioned in paragraph [0032] is interpreted as minimal radial distance of the curved innermost end of the third and fourth surfaces from the centre AX. This end location is however where these surfaces are not even oriented in the radial direction, as is evident from figure 8. Moreover, the appellant's arguments imply that claim 1 is interpreted based on figure 8. The board notes that, as correctly pointed out by the respondent, not all elements of figure 8 are included in the subject-matter of claim 1. While it may be correct, as argued by the appellant, that original disclosure may be based on a selection of the elements shown in a figure without contravening Article 123(2) EPC, such a general statement does not mean that it is always allowable to omit elements shown in a figure.

1.12 The appellant further argued that they acknowledged the respondent's argument that the connection region 15 belongs to the rotor core, whereas the first surface 51 belongs to the shaft member 40 and feature 1.10 thus concerns properties of the corners different from those discussed in paragraph [0032]. However, they argued that these differences did not give rise to undisclosed matter or an inconsistency or contradiction between the claimed features and the description or the drawings. As an illustration, they referred to figure 4. Following the (curved) line defined by the connection region 15 and the first surface 51, the point defining the first corner 61 was encountered between these two elements. Following the (angled) line defined by the first surface 51 and the third surface 53, the point defining the first corner 61 was encountered between

these two elements. The definitions of paragraph [0032] and feature 1.10 were simultaneously satisfied in Fig. 4 and thus mutually compatible.

1.13 The board notes in this context that claim 1 does not contain any limitation which would justify such limited interpretations of claim 1 in an unambiguous manner. The corresponding wordings regarding the location of the first and second corners and the connection region and the non-connection region are merely juxtaposed in claim 1 without any information about whether or how they should correspond to each other.

1.14 Even if it were considered correct that in view of figure 4, it is possible to interpret feature 1.10 in such a way that it does not contradict the content of paragraph [0032], such an interpretation is not the same as a direct and unambiguous disclosure for feature 1.10. Obviously, the appellant's analysis builds on the assumption that the first and second corners in figure 4 are the same as those in figure 8. The board does not agree. As correctly pointed out by the respondent, figure 4 does not represent an embodiment of the claimed invention but refers to paragraph [0032]. The embodiment of the claimed subject-matter was shown in figure 8. According to figure 4 the first and second corners show a right angle whereas according to figure 8 the first and second corners each define an acute angle. Therefore, the board is not convinced by the appellant's argument that the differences between feature 1.10 and paragraph [0032] do not give rise to undisclosed matter.

1.15 Consequently, the board concludes that even taking the appellant's new submissions into account, feature 1.10 has no basis in the application as originally filed.

Thus, the board has reached the conclusion that the ground of opposition under Article 100(c) EPC prejudices the maintenance of the patent as granted.

2. Auxiliary requests 1 to 19 - Article 13(2) RPBA and Article 123(2) EPC

2.1 During the oral proceedings before the board the appellant argued that the additional features in claim 1 according to auxiliary requests 10 to 19 (as indicated above under IX.) concerning recessed portions were suitable to overcome the objections under Article 100(c) EPC against feature 1.10 of claim 1 according to the main request. No arguments were presented regarding auxiliary requests 1 to 9.

2.2 In this context the board is not convinced that the appellant's new submissions merely represent a development or refinement of those submissions that were presented already earlier. In particular, the appellant's argument that feature 1.10 was equivalent to the disclosure of paragraph [0032] and figure 8 of the published application was first introduced by the appellant in their latest letter dated 3 May 2024. Moreover, the appellant's written submissions do not contain any explanation regarding the purpose of the additional features introduced in claim 1 according to auxiliary requests 10 to 19 concerning the recessed portions and how they would interact with feature 1.10.

2.3 The appellant's letter dated 20 January 2023 in response to the respondent's reply to the appeal merely contains the following regarding auxiliary request 10 on page 11 in section IV.D:

"Regarding the features of claim 1 as granted, reference is made to section II above as well as sections II and IV-VII of the Grounds of Appeal....The Patent Proprietor notes that the analysis brought forward regarding novelty and inventive step does not rely on any of these features, which were introduced in response to assertions of added subject matter (in particular, alleged intermediate generalizations)."

The board notes that section II of the appellant's letter dated 20 January 2023 merely contains arguments regarding the main request.

- 2.4 Similarly, of sections II and IV to VII of the appellant's grounds of appeal only section VII deals with auxiliary requests 10 to 14 and has the following wording:

"VII. Allowability of auxiliary requests 10-14

Auxiliary request 10 was originally introduced during the opposition phase (as auxiliary request 1) in the letter of September 30, 2022. The amendments made in the corresponding claim set address certain objections under Art. 123(2) EPC originally raised by the Opponent, but considered unsubstantiated by both the Patent Proprietor and the Opposition Division.

Auxiliary requests 11, 12, 13, and 14 combine said amendments with the additional limitations according to auxiliary requests 1, 2, 3, and 4, respectively, which further distinguish the subject matter of claim 1 from the cited prior art.

Auxiliary requests 10-14 are maintained here merely as a precaution. Regarding their allowability, reference is made to the letter of September 30, 2022 (sections II-V, respective subsections labeled "Auxiliary request 1) as well as the passages cited in section IV above with respect to auxiliary requests 1-4."

The board notes that the cited passages in the appellant's grounds of appeal do not contain any substantive argument why the additional features of auxiliary request 10 would overcome the objections against feature 1.10 of claim 1 according to the main request either.

2.5 In the appellant's latest letter dated 3 May 2024, section III deals with procedural admissibility of auxiliary requests 5 to 9 and 15 to 19. However, this section equally does not contain any substantive argument why or how the additional features in auxiliary request 10 would contribute to overcoming the objections against feature 1.10 of claim 1 according to the main request.

2.6 Therefore, the board concludes that none of the passages cited by the appellant is suitable to provide any arguments regarding the additional features present in claim 1 according to the auxiliary requests 10 to 19 with respect to feature 1.10. Thus, there are no substantive arguments in the appellant's pleading presented in writing concerning the additional features of auxiliary request 10 (and 11-19) with respect to which the appellant's new submissions during the oral proceedings before the board could be considered as being a development or a refinement of submissions already presented earlier. Consequently, the board concludes that the appellant's new submissions

presented during the oral proceedings before the board amount to an amendment of the appellant's appeal case within the meaning of Article 13(2) RPBA.

- 2.7 Such an amendment may be admitted at the board's discretion only if there are exceptional circumstances justified by cogent reasons.
- 2.8 Regarding the presence of exceptional circumstances the board agrees with the respondent's objection that the appellant's new submissions were presented for the first time during the oral proceedings before the board. Having regard to the fact that the respondent had raised their objection under Article 123(2) EPC against auxiliary request 10 already in their reply to the appeal dated 22 November 2022, the board is not aware of any reason why the appellant could not have presented corresponding submissions already with their reply to the respondent's reply to the appeal dated 20 January 2023 at the latest. The appellant has also not indicated any such reasons.
- 2.9 Consequently, the board concluded that no exceptional circumstances have been justified by the appellant and decided to exercise its discretion under Article 13(2) RPBA not to take the appellant's new submissions as regards auxiliary requests 10 to 19 into account.
- 2.10 As already set out above, the appellant has not provided substantive arguments why any of the other amendments made to auxiliary requests 1 to 19 would be suitable to overcome the objection under Article 100(c) EPC against claim 1 according to the main request with respect to feature 1.10 during the written appeal procedure either.

2.11 Since the board exercised its discretion not to take into account the appellant's submissions regarding auxiliary requests 10 to 19 made during the oral proceedings before it, there are no arguments of the appellant, nor is it discernible for the board, as to why any of auxiliary requests 1 to 19 would be suitable to overcome the objection under Article 100(c) EPC against the main request which the board needs to take into account. The board therefore accedes to the respondent's argument as set out on page 19, section G) of their reply to the appeal that claim 1 according to auxiliary request 10 was not allowable under Article 123(2) EPC because it contained all (inadmissibly amended) features of granted claim 1.

2.12 Therefore, the board's conclusion regarding the main request as set out above under 1.11 applies correspondingly under the provisions of Article 123(2) EPC to auxiliary requests 1 to 19.

Therefore - irrespective of the question of admittance - none of auxiliary requests 1 to 19 is allowable.

3. Auxiliary requests 20 to 29 - Article 13(1) RPBA

3.1 Regarding auxiliary requests 20 to 29 there was dispute whether the additional features added to claim 1 according to auxiliary requests 20 to 29 were *prima facie* suitable to overcome the objection under Article 100(c) EPC against feature 1.10 of claim 1 according to the main request within the meaning of Article 13(1) RPBA.

3.2 The appellant argued that the additional features had to be read together with the remaining features of

claim 1 defining the location of the first and second corners, in particular with feature 1.7. The additional features inevitably had the effect that the features of claim 1, even without considering feature 1.10, resulted in the same locations for the first and second corners as according to the wording of feature 1.10 such that feature 1.10 could be considered as no longer providing any further limitation to the subject-matter of claim 1. Therefore, feature 1.10 could not be considered to represent an inadmissible amendment any more and as a consequence, claim 1 according to auxiliary requests 20 to 29 no longer contravened Article 123(2) EPC.

3.3 The board is not convinced by the appellant's arguments. As correctly pointed out by the respondent, the introduction of the features corresponding to the disclosure of paragraph [0032] in claim 1 does not render feature 1.10 allowable. As further argued by the respondent, the presence of a second redundant definition of the same features, namely the first and second corners, in claim 1 is not suitable to "neutralise" feature 1.10 within the meaning of the appellant's corresponding objection, but instead gives rise to an additional objection of lack of clarity under Article 84 EPC instead.

3.4 Further, the board has already established with respect to the main request that feature 1.10 has no basis in paragraph [0032] of the published application. Therefore, the board does not agree with the appellant that adding the features of paragraph [0032] and reading them together with the remaining features of claim 1 provides a definition of the first and second corners which is identical with the one resulting from feature 1.10. Consequently, the appellant's argument

that feature 1.10 would no longer provide any further limitation to claim 1 and thus would not contravene Article 123(2) EPC does not convince the board.

Also for this reason, the additional features of claim 1 according to auxiliary request 20 to 29 are *prima facie* not suitable to overcome the objection against feature 1.10 of claim 1 according to the main request.

3.5 Consequently, the board decided to exercise its discretion under Article 13(1) RPBA not to admit auxiliary requests 20 to 29 into the appeal proceedings.

4. Concluding remarks

4.1 Given the above conclusions, the respondent's request for remittal of the case to the opposition division and the appellant's request to refer questions related to the interpretation of features 1.13 and 1.14 to the Enlarged Board of Appeal are not relevant for the outcome of the case and therefore do not need to be considered, which was agreed by the parties (see the minutes of the oral proceedings before the board, page 3, last paragraph and page 4, first paragraph).

4.2 Since the opposition ground under Article 100(c) EPC prejudices the maintenance of the patent as granted, and since none of the auxiliary requests which have been admitted into the proceedings is allowable, the board accedes to the main request of the respondent.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated