

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**Datasheet for the decision  
of 3 April 2012**

**Case Number:** T 2330/08 - 3.5.02

**Application Number:** 01126004.9

**Publication Number:** 1179881

**IPC:** H02K 3/12

**Language of the proceedings:** EN

**Title of invention:**  
AC generator for vehicles

**Applicant:**  
Denso Corporation

**Opponent:**  
Valeo Equipements Electroniques Moteur

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 123(3), 123(2), 76(1)

**Keyword:**  
"Amendments - Opposition proceedings - Inescapable trap (yes)"

**Decisions cited:**  
G 0001/93

**Catchword:**  
-



Case Number: T 2330/08 - 3.5.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.02  
of 3 April 2012

**Appellant:**  
(Patent Proprietor)

Denso Corporation  
1-1, Showa-cho  
Kariya-city  
Aichi-pref. 448-8661 (JP)

**Representative:**

Winter, Brandl, Fürniss, Hübner,  
Röss, Kaiser, Polte - Partnerschaft  
Patent- und Rechtsanwaltskanzlei  
Alois-Steinecker-Straße 22  
D-85354 Freising (DE)

**Respondent:**  
(Opponent)

Valeo Equipements Electroniques Moteur  
2, rue André Boulle  
B.P. 150  
F-94017 Créteil Cedex (FR)

**Representative:**

Gamonal, Didier  
Valeo Equipements Electriques Moteur  
Propriété Industrielle  
2 rue André Boulle  
B.P. 150  
F-94017 Créteil Cedex (FR)

**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office posted 8 October 2008  
revoking European patent No. 1179881 pursuant  
to Article 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** M. Ruggiu  
**Members:** M. Léouffre  
R. Moufang

## Summary of Facts and Submissions

- I. The proprietor appealed against the decision of the opposition division to revoke European patent No. 1 179 881, which was based as a divisional application of earlier European patent application No. 98109359.4 (published as EP-A2-0 881 742). The reasons given for the decision were that the subject-matter of the main request infringed Article 123(3) CBE and that the subject-matter of the auxiliary request did not meet the requirements following from Article 76(1) EPC as it contained subject-matter which extended beyond the content of the earlier application.
- II. The appellant proprietor requested that the decision of the opposition division be set aside and the patent be maintained in amended form on the basis of amended claims 1 to 5 according to a main request or claims 1 to 5 according to a first auxiliary request or claims 1 to 5 according to a second auxiliary request with amended description pages 2 and 2a, all requests filed on 10 February 2009 with the grounds of appeal and with a request for oral proceedings.

The appellant requested further to refer the following legal questions to the Enlarged Board of Appeal in case they become decisive for the decision and are doubted to be answered to the affirmative:

- "a) Can a patent granted on a divisional application which at its actual date of filing extended beyond the content of the earlier application, be amended in order to cure invalidity of the divisional application?
- b) If question a) is answered to the affirmative, can a feature not disclosed in the application as filed or

the earlier application in case of a divisional application, be maintained in a granted European patent if a disclaimer is provided in the description or in the claims, to the effect that the feature in question extends beyond the content of the application as filed or the earlier application, respectively, and no rights may be derived from the feature?

c) If question b) is answered to the negative, in general, does it make a change when the feature has been included during the examining procedure due to misinterpretation of law and/or procedural deficiencies applied by the Examining Division?

d) If question c) is answered to the negative, in general, does it make a change when the feature has never been object of discussion during the procedure in writing and was demanded to be added by the Examining Division during oral proceedings?

e) If question d) is answered to the negative, in general, does it make a change when the feature missing in the earlier application was disclosed at the date of filing in the divisional application, has been deleted voluntarily by the applicant during the procedure in writing and was demanded to be reintroduced in the claim by the Examining Division during oral proceedings?"

III. The respondent opponent requested that the appeal be dismissed and that oral proceedings be held if the board did not intend to dismiss the appeal.

IV. On 25 November 2011, the board summoned the parties to oral proceedings scheduled for 21 March 2012 and expressed its preliminary opinion that the main request would not meet the requirements following from Article

123(3) EPC while the first and second auxiliary requests would not comply with Article 76(1) EPC.

V. In response to the summons, with letter of 8 February 2012, the appellant withdrew their request for oral proceedings.

VI. The oral proceedings were cancelled on 17 February 2012.

VII. Claim 1 of the main request reads as follows:

"An AC generator (1) for a vehicle comprising:  
a rotor (2) having a fan (11) on at least one side of axial ends and a plurality of magnetic poles;  
a stator (3) disposed around the rotor (2), the stator comprising a laminated stator core (32) having a plurality of slots (35), a stator winding (33) housed in the slots, comprising a plurality of electric conductors (33) in a substantially equal dispersed pattern, and an insulator (34) for insulating the stator winding from the stator core, wherein the insulator (34) is opened toward an inner peripheral opening of the respective slot (35); and  
a frame (4) for supporting the rotor (2) and the stator;  
said electric conductors being continuous wires and having round cross-section, so that space gaps (38) are formed in the slots (35),  
characterised in that  
each of the slots (35) is defined by circumferentially opposing side walls which are parallel over the entire depth in a radial direction;

at least two of said plurality of electrical conductors are arranged in each of the slots without a circumferential space; and  
the ratio of the total area of the space gap (38) to the cross-section (37) of the slot is set to 25% or less."

Claim 1 of the first auxiliary request reads as follows:

"An AC generator (1) for a vehicle comprising:  
a rotor (2) having a fan (11) on at least one side of axial ends and a plurality of permanent magnets;  
a stator (3) disposed around the rotor (2), the stator comprising a laminated stator core (32) having a plurality of slots (35), a stator winding (33) housed in the slots, comprising a plurality of electric conductors (33) in a substantially equal dispersed pattern, and an insulator (34) for insulating the stator winding from the stator core, wherein the insulator (34) is opened toward an inner peripheral opening of the respective slot (35); and  
a frame (4) for supporting the rotor (2) and the stator;  
said electric conductors being continuous wires and having round cross-section, so that space gaps (38) are formed in the slots (35), characterised in that each of the slots (35) is defined by circumferentially opposing side walls which are parallel over the entire depth in a radial direction;  
at least two of said plurality of electrical conductors are arranged in each of the slots without a circumferential space; and

the ratio of the total area of the space gap (38) to the cross-section (37) of the slot is set to 25% or less."

Claim 1 of the second auxiliary request is identical to claim 1 of the first auxiliary request. Page 2a of the second auxiliary request contains the following text: "According to the claimed invention, an AC generator for vehicles has a rotor having a plurality of permanent magnets. The provision of permanent magnets is not mentioned in the earlier application of the divisional application the patent is based on, and thus extends beyond the content of the earlier application. Hence, no rights may be derived from the feature of permanent magnets."

Claims 2 to 5 are dependent on claim 1 and identical for all requests.

VIII. The appellant essentially argued as follows:

Claim 1 of the application as filed specified "a rotor (2) having a plurality of permanent magnets". However during the examination procedure and from their own volition the applicant filed amended claims wherein the feature of "a plurality of permanent magnets" was deleted (cf. claims filed with the letters dated 23 October 2002, 27 August 2003 and 19 December 2003). During the oral proceedings before the examining division, the chairman objected that the omission of the feature "a rotor having a plurality of permanent magnets" would violate Article 123(2) EPC. The applicant was taken by surprise and reintroduced the feature into claim 1.

VIII.I The feature of "a plurality of permanent magnets" was an unintended error. It should have read "a plurality of magnetic cores". The correction of this error should be admitted under Rule 88 EPC 1973 without being in conflict with Article 123(3) EPC for the following reasons:

Specifying "permanent magnets" in claim 1 was unnatural in the context of the general teaching of the claim." The purpose and inventive effect of the present invention was indicated in section [0014] of the patent in suit and related to corrosion problems within the stator slots. The solution to these problems was not "influenced by the use or omission of permanent magnets in the rotor". Hence, the person skilled in the art having studied the patent and suspecting that something else was intended rather than the permanent magnets would "undoubtedly recognise that the claws of the rotor as shown in Fig.2 of the patent must have been mistaken as permanent magnets" (main request).

VIII.II The "permanent magnets" did not contribute to the subject-matter of the claimed invention and merely limited the protection conferred by the patent as granted by excluding protection for AC generators without permanent magnets. Thus, following the findings in G1/93 in the context of the interdependence between Articles 123(2) and 123(3) EPC, which should be directly applicable to the interdependence between Article 76 EPC and Article 123(3) EPC, the feature of "a plurality of permanent magnets" should be allowed to remain in the claim without infringing the requirements following from Article 76 EPC (first auxiliary request).



VIII.III The wording of the technical feature of the granted claim 1, namely "a rotor (2)...having a plurality of permanent magnets" could also be interpreted in the light of a disclaimer (second auxiliary request). A disclaimer was not foreign to the system of the EPC and as correctly noted in G1/93, Article 69 EPC and its "protocol on interpretation" allowed references to the description.

IX. The relevant arguments of the respondent can be summarised as follows:

IX.I The feature of claim 1 "at least two of said plurality of electric conductors are arranged in each of the slots without a circumferential space" did not have any basis in the application as filed (Article 123(2) EPC).

IX.II The feature of claim 1 of the main request "a rotor (2) having a fan (11) on at least one side of axial ends and a plurality of magnetic poles" extended the protection conferred by the granted patent contrary to the requirements following from Article 123(3) EPC. This feature was not present in the earlier application EP 0 881 642 which disclosed "a rotor having a plurality of claw-type magnetic poles". The content of the patent had therefore been extended beyond the content of the original application (Article 76 EPC).

IX.III The removal of the feature "a plurality of permanent magnets" from claim 1 infringed Articles 123(2) and 123(3) EPC because this feature was present in claim 1 of both the application as filed and the patent as granted.

IX.IV This feature could not be considered as erroneously present in the originally filed claim 1 because it was present in at least two of the seven priority documents (WO1997JP01778 and WO1997JP03374), which disclosed claw-shaped rotor poles provided with permanent magnets (cf. claim 70 of WO1997JP03374). No correction should therefore be allowed under Rule 88 EPC 1973. This feature was not introduced during examination and thus should not be compared with the added feature discussed in G1/93.

IX.V The permanent magnets inserted between the claw-shaped rotor poles might reduce the centrifugal forces applied to the salty droplets and thereby the penetration of salty water into the stator slots. Thus the permanent magnets might contribute to the solution of the problem of "generation of rust in the inner wall portion of the slots of the stator core and corrosion deterioration of a coil film" (cf. section [0014] of the patent). Furthermore, the use of permanent magnets in the rotor of an alternator was part of the common general knowledge of the skilled person as was apparent from document D0 (EP-A-0 732 795).

### **Reasons for the Decision**

1. The appeal is admissible.
  
2. The European patent in accordance with the main request has been amended in a way that it contains subject-matter which extends the protection conferred by the patent contrary to Article 123(3) EPC.

2.1 The feature "at least two of said plurality of electric conductors are arranged in each of the slots without a circumferential space" can be found in claim 1 of each request in place of the feature of claim 1 as granted "said plurality of electric conductors is arranged in the slots without a circumferential space". The new wording infringes Article 123 (3) EPC because the term "at least two" broadens the scope of protection since it was a requirement of the characterising part of claim 1 as granted that the (whole) plurality of electrical conductors had to be arranged in a specific manner.

2.2 Claim 1 of the main request does not include the feature "a rotor having...a plurality of permanent magnets" that was part of claim 1 of the patent as granted.

The board shares the view of the respondent that the permanent magnets might contribute to the solution of the problem mentioned at section [0011]: "preventing stoppage of generation due to a short-circuit within a stator slot caused by water-splashing from outside" and at section [0014]: "prevent generation of rust in the inner wall portion of the slots of the stator core and corrosion deterioration of a coil film in the slots". Actually the permanent magnets could only be inserted between the claw-shaped poles of the rotor, filling partly at least the gap between the poles as shown for example in figure 2 of D0 (permanent magnets 30). The ventilation effect of the claw-shaped poles would then be reduced and the water projections present in the air gap would be subject to lower centrifugal pressure. The water penetration in the axial slots of the stator

would thereby be reduced, and so would be rust on inner wall portions of the slots.

Since this feature may provide a technical contribution to the subject-matter of the claimed invention, its removal contravenes the requirement of Article 123 (3) EPC.

3. The European patent in accordance with all the applicant's requests on file has been amended in a way that it contains subject-matter which extends beyond the content of the application as filed contrary to Article 123(2) EPC or beyond the content of the earlier application contrary to Article 76(1) EPC.
  - 3.1 The earlier application does not disclose "a rotor (2)...having a plurality of permanent magnets". The first and second auxiliary requests contain therefore subject-matter which extends beyond the content of the earlier application contrary to the requirements following from Article 76(1) EPC.
  - 3.2 In the main request the feature "a rotor (2)...having a plurality of magnetic poles" replaces the feature "a rotor (2)...having a plurality of permanent magnets". The subject-matter of the main request extends therefore beyond the content of both the application as filed (Article 123(2) EPC) and the earlier application (Article 76 (1) EPC) because in both applications, the poles are specified as "Lundell type pole cores" (cf. paragraph [0020] of the application and column 5, line 34 of the earlier application as published).

4. The appellant proposes five questions to be addressed to the Enlarged Board of Appeal. Article 112 (1) (a) EPC specifies that following a request from a party to the appeal, the Board shall refer any question to the Enlarged Board of Appeal if it considers that a decision is required in order to ensure uniform application of the law, or if a point of law of fundamental importance arises.

On the one hand the Board did not find any argument from the appellant referring to a non uniform application of the law and, on the other hand, the points of law addressed by the appellant and which could be considered to be of fundamental importance appear to the Board as having been answered by the Enlarged Board of Appeal in the decisions G1/93, G1/05, G1/06 and G2/10.

- 4.1 In decision G1/93 the Enlarged Board of Appeal ruled on the question of "limiting extensions". In the present case, the "European patent" as granted contains a limiting feature (the permanent magnets) which hinders any possibility of amendment. However other conflicts between Articles 123 (2) and 123 (3) EPC do exist that can be solved (cf. T166/90). Question a) should therefore be answered to the affirmative: a patent granted on a divisional application which at its date of filing extended beyond the content of the earlier application may be amended to cure the invalidity of the divisional application if the amendment complies with the requirements following from Article 123 (3) EPC.

- 4.2 According to decision G1/93 (see section 14 of the reasons) there is no basis under the EPC for a disclaimer in form of a "footnote" (question b). The application of the law seems here to be uniform (cf. T335/03 and T1180/05).
- 4.3 Finally and with respect to questions c), d) and e), the said decision G1/93 (see section 13 of the reasons, last sentence) confirmed that the ultimate responsibility for any amendment of a patent application (or a patent) always remains that of the applicant (or the patentee).

## **Order**

### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:

U. Bultmann

M. Ruggiu