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**Datasheet for the decision  
of 4 October 2012**

**Case Number:** T 1714/08 - 3.5.02

**Application Number:** 03102536.4

**Publication Number:** 1365420

**IPC:** H01B 3/20, H01F 27/12

**Language of the proceedings:** EN

**Title of invention:**  
Vegetable all based dielectric coolant

**Patentee:**  
Cooper Industries, Inc.

**Opponent:**  
M & I Materials Limited  
ABB AB

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 76(1)  
RPBA Art. 12(4), 13(3)

**Keyword:**  
"Added subject-matter - yes (main request, auxiliary requests A to Q)"  
"Admissibility of late filed request - no (auxiliary request R)"

**Decisions cited:**  
G 0001/06

**Catchword:**  
-



Case Number: T 1714/08 - 3.5.02

**DECISION**  
of the Technical Board of Appeal 3.5.02  
of 4 October 2012

**Appellant:** Cooper Industries, Inc.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 7 July 2008  
revoking European patent No. 1365420 pursuant  
to Article 101(2) and Article 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** M. Ruggiu  
**Members:** R. Lord  
P. Mühlens

## Summary of Facts and Submissions

- I. This is an appeal of the proprietor against the decision of the opposition division revoking the European patent No. 1 365 420. The application on which the patent was based was filed as a divisional application of the European patent application published as EP 1 304 704 A2 (referred to in this decision as the parent application), which was in turn filed as a divisional application of the European application based on the international application published as WO 97/22977 (referred to in this decision as the grand-parent application). The grounds for the decision were that the proprietor's main request contravened Article 76(1) EPC with respect to both the parent application and the grand-parent application, and also contravened Article 123(2) EPC, and that each of the auxiliary requests A to I contravened Article 76(1) EPC with respect to both the parent application and the grand-parent application.
- II. Oral proceedings before the board took place on 4 October 2012.

The appellant (proprietor) requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed with letter of 27 October 2008 or, if that is not possible, that the patent be maintained in amended form on the basis of one of the auxiliary requests A to N filed with letter of 27 October 2008 or on the basis of the auxiliary requests O, P or Q filed with letter of 4 September 2012, and that a new auxiliary request R filed at the oral proceedings of 4 October 2012 be

admitted into the proceedings.

The respondents (opponents 1 and 2) requested that the newly filed auxiliary request R not be admitted into the proceedings, and that the appeal be dismissed.

The board decided not to admit auxiliary request R into the proceedings.

III. Claim 1 of the proprietor's main request reads as follows:

"An electrical device comprising a transformer with a dielectric fluid (18) therein;

the dielectric fluid comprising at least one vegetable oil and an antioxidant;

characterised in that

the vegetable oil having a viscosity of  $2 \times 10^{-6}$  to  $15 \times 10^{-6}$  m<sup>2</sup>/s (2 to 15 cSt) at 100°C and less than  $110 \times 10^{-6}$  m<sup>2</sup>/s (110 cSt) at 40°C;

and that the dielectric fluid (18) is biodegradable."

This claim is identical to claim 1 of the patent in suit as granted.

Independent claim 1 according to each of the proprietor's auxiliary requests A to Q defines an electrical device comprising a transformer as in the opening phrase of claim 1 of the main request, or variants on that wording, and each includes the same definition that "the dielectric fluid (18) is biodegradable" as in claim 1 of the main request.

IV. As far as the issues addressed in this decision are concerned, the appellant essentially argued as follows:

A transformer with a dielectric fluid was inherently one which was suitable for electrical power and distribution equipment, so that even if this was no longer explicitly defined in claim 1 of the main request, this was nonetheless implicit. Consideration of the hypothetical wording "electrical power and distribution equipment transformer" was relevant in this context.

When each of the grand-parent and parent applications was properly considered as a whole, in particular taking into account paragraphs [0005] and [0010] of the parent application and the corresponding passages in the grand-parent application, it was clear that the skilled reader would have understood from these that the dielectric fluid was biodegradable.

The amendments in the newly-filed auxiliary request R could not have been filed earlier because the argumentation in the decision under appeal relating to the definition "*electrical device comprising a transformer*" was not clear, and this lack of clarity had only been resolved during the discussion of the main request at the oral proceedings before the board.

V. The arguments of the respondents to the extent that they are relevant for this decision can be summarised as follows:

From the first paragraph of each section of the description of the grand-parent application it was

clear to the skilled person that the invention was restricted to "*electrical distribution and power equipment, including transformers*" (page 1, lines 4 to 5 and 12 to 13, page 4, line 19) or the essentially equivalent "*electrical distribution and power equipment, and transformers in particular*" (page 4, line 4). Claim 1 of the appellant's main request on the other hand defined only an "*electrical device comprising a transformer*". Although the scope of this definition overlapped with that in the grand-parent application, its meaning was distinct, and in particular covered transformers which were not suitable for power and distribution equipment, for which there was no basis in the original grand-parent application. For this reason the main request contravened Article 76(1) EPC.

Neither the grand-parent nor the parent application contained any teaching that the dielectric fluid as a whole was biodegradable. The disclosure of paragraph [0005] of the parent application and the corresponding passage of the grand-parent application provided no basis for this feature, firstly because they described only general objects addressed by the invention, not technical features of the claimed device, and secondly because those passages described several different objects, with no suggestion that this particular one could be taken out of context. This latter point was supported by paragraph [0010] of the parent application and the corresponding passage of the grand-parent application, which taught that the biodegradability was linked to other objects in the list of paragraph [0005].

Claim 15 of the grand-parent application also could not provide a basis for this definition, because it

disclosed only that the vegetable oil, not the dielectric fluid as a whole, was biodegradable, and because this disclosure was in an entirely different context from that now claimed. That there was no disclosure that the dielectric fluid as a whole was biodegradable was also indicated by the fact that two components of the fluid described in both the grand-parent and parent applications could be compounds which are not biodegradable, specifically the acrylic oligomers and polymers as pour-point suppressant and the various phenolic compounds as antioxidant, the former of these having been identified as such by the appellant himself during the procedure before the opposition division (letter dated 21 December 2007, page 16). Thus also for this reason the main request contravened Article 76(1) EPC.

Both of the above objections also applied to all of the auxiliary requests A to Q.

The auxiliary request R should not be admitted into the procedure because it was late-filed. The appellant had not given any convincing reason why it had not been filed earlier in the procedure, given that both of the objections discussed during the oral proceedings with respect to the main request had been raised at the beginning of the opposition procedure. Moreover, the amendment relating to the definition of biodegradability did not represent a serious attempt to address the objection raised against the main request, and its unclear meaning led to new objections arising, which neither the respondents nor the board could be expected to address during the oral proceedings.

Respondent II additionally argued that the appeal was not admissible, because the appeal grounds addressed only the opposition grounds under Article 100(c) EPC, whereas the oppositions had also raised grounds under Article 100(a) and (b) EPC.

## **Reasons for the Decision**

1. Respondent II has argued that since the oppositions raised grounds under paragraphs (a), (b) and (c) of Article 100 EPC, whereas the grounds for appeal addressed only the grounds under Article 100(c) EPC (in combination with Articles 76(1) and 123(2) EPC), the appeal did not present the "party's complete case", as stipulated by the Rules of Procedure of the Boards of Appeal. The board notes however that the decision under appeal dealt only with objections under Articles 76(1) and 123(2) EPC, and that the appellant's grounds of appeal contain substantiated arguments addressing all of those objections. The board therefore concludes that the grounds of appeal presented the appellant's complete case as to why the decision under appeal should be set aside, as required by Rule 99(2) EPC, so that the appeal is admissible.
  
2. *Main request - Added subject-matter (Article 76(1) EPC)*
  - 2.1 As a preliminary remark, the board observes that it has been established in the decision of the Enlarged Board of Appeal G 1/06 (OJ EPO 2008, 307) that in the case of a sequence of divisional applications, an application or patent must satisfy the requirements of Article 76(1) EPC with respect to each of the preceding applications



as filed. Thus, in the present case the patent must meet those requirements with respect to the grand-parent application and with respect to the parent application.

- 2.2 Each section of the description of the grand-parent application as originally filed commenced with a statement indicating that the invention concerned "*electrical distribution and power equipment, including transformers*" (page 1, lines 4 to 5 and 12 to 13, page 4, line 19 of the published international application) or the essentially equivalent "*electrical distribution and power equipment, and transformers in particular*" (page 4, line 4). The independent claims 1, 5 and 6 of that application also each included a definition that the claimed dielectric fluid was "*for use in power distribution transformers*". The teaching of the grand-parent application considered as a whole is thus that it relates to transformers only to the extent that they are suitable for use in electrical power and distribution equipment. The corresponding definition in claim 1 of the appellant's main request is distinctly different from that teaching, since it specifies only an "*electrical device comprising a transformer*". In particular, this definition includes within its scope transformers which are not suitable for use in electrical power and distribution equipment. For the reasons indicated above, the skilled person would have understood the grand-parent application as originally filed as not relating to such transformers. The absence of a limitation relating to distribution and power equipment thus results in the present claim 1 defining subject-matter which extends beyond the content of the grand-parent application as originally

filed, hence contravening Article 76(1) EPC.

2.2.1 The appellant's arguments concerning this aspect of the decision under appeal mainly address the issue of the difference between the wording "*electrical ... equipment, including transformers*" in the grand-parent application and the wording "*electrical device comprising a transformer*" in the present claim. This difference is however not relevant to the above reasoning, since that is based only on the omission of the limitation to transformers which are suitable for power and distribution equipment. Similarly the hypothetical wording mentioned in this respect by the appellant ("*electrical power and distribution equipment transformer*") is not relevant precisely because it is merely hypothetical, and is as such different from both the original and the present wording.

2.2.2 The appellant has additionally argued that any transformer with dielectric fluid as claimed would inherently be one suitable for power and distribution equipment. The board does not find this argument convincing, because the skilled person would understand the expression "*electrical power and distribution equipment*" as implying certain characteristics (e.g. physical dimensions and power handling capacity) which would not necessarily be possessed by any transformer with dielectric fluid as claimed. As an example, it could be expected that the transformer of a medical X-ray device would be immersed in dielectric fluid, but in the view of the board the skilled person would not consider such a transformer to be an example of electrical power and distribution equipment.

2.3 Claim 1 according to the appellant's main request defines that "*the dielectric fluid is biodegradable*". The only passage of the parent application as originally filed which contains any suggestion of this feature is in paragraph [0005] of the published application (in particular, column 2, lines 2 to 6).

2.3.1 However, this does not provide a clear and unambiguous disclosure of this feature, for two reasons. Firstly, this passage does not describe features of the invention as such, but instead is an indication of the general object of the invention, with biodegradability being merely one of a list of five different desired properties of the "*insulating liquid*". The board is of the opinion that such a list cannot be considered as providing a clear and unambiguous disclosure that the insulating fluid of the invention actually demonstrates this one property (regardless of the question as to whether "*insulating liquid*" and "*insulating fluid*" are synonymous). Secondly, the discussion of the biodegradation process in paragraph [0010] suggests that the biodegradability property is not independent of the other properties in the list of paragraph [0005], because it is linked to the properties that the liquid should be non-toxic and innocuous to the environment. Thus the parent application provides no basis for the extraction of this one property from the list of properties in paragraph [0005].

2.3.2 Furthermore, the parent application does not contain any clear and unambiguous disclosure that the dielectric fluid as a whole is biodegradable, as defined in the present claim. To the contrary, that application discloses in paragraph [0026] that the

antioxidant can be one of a number of phenolic compounds (for instance those referred to there as BHA, BHT, TBHQ, and THBP), and in paragraph [0027] that the fluid can include a low temperature additive (pour-point suppressant) in the form of acrylic oligomers or polymers, all of which can be assumed to be non-biodegradable. Indeed, as respondent II has pointed out, the appellant has argued exactly this with respect to the acrylic oligomers and polymers during the procedure before the opposition division (see page 16 of the proprietor's letter dated 21 December 2007). Moreover the parent application indicates that the antioxidant BHA has antimicrobial properties, which would obviously act to reduce its biodegradability (see paragraph [0030]).

2.3.3 Thus, considering the disclosure of the parent application as a whole, the board concludes that that application does not disclose clearly and unambiguously that the dielectric fluid is biodegradable. Therefore the present claim 1 defines subject-matter which extends beyond the content of the parent application as originally filed, so that also for this reason the claim contravenes Article 76(1) EPC.

2.3.4 This objection applies also with respect to the grand-parent application, since the relevant disclosure in that application differed from that of the parent application only by the presence of claim 15. However that claim defined only that the vegetable oil was biodegradable, not the dielectric fluid as a whole, and defined that feature in combination with a number of other features which overlap only to a limited extent with the combination of features of the present claim 1.

This further disclosure in the grand-parent application therefore does not provide a basis for the definition in the present claim, either considered alone or in combination with the remainder of the application, so that also for this reason claim 1 of the appellant's main request contravenes Article 76(1) EPC.

2.3.5 The appellant's sole counter-argument in this respect was that the parent and grand-parent applications did disclose that the dielectric fluid was biodegradable, if the teaching of each of those applications was taken as a whole, in particular paragraphs [0005] and [0010] of the parent application and the corresponding passages of the grand-parent application. The board does not find this argument convincing, since, as is evident in particular from paragraphs 2.3.1 and 2.3.2, the above conclusions are based on a consideration of these documents as a whole.

3. *Auxiliary requests A to Q*

Claim 1 according to each of these requests includes the same definition that "*the dielectric fluid (18) is biodegradable*" as claim 1 of the main request. Thus at least the conclusions of paragraphs 2.3.3 and 2.3.4 above apply correspondingly to all of these requests.

4. *Auxiliary request R - admissibility*

4.1 Auxiliary request R differs from the previously filed auxiliary request E in that in line 1 of claim 1 the words "distribution and power equipment" are inserted before "transformer" and the word "biodegradable" is inserted before "dielectric", in that in line 4 of

claim 1 the word "having" is replaced by "has", and in that the final line of the claim has been deleted.

4.2 The appellant filed this request during the oral proceedings before the board only after the conclusion of the discussion of his main request. The case law of the boards of appeal has established that in order for an amended request filed at such a late stage of the procedure to be admitted into the proceedings a number of criteria should be satisfied, including that there should be a good reason why it had not been filed earlier, and that it should represent a serious attempt to address the objections raised. Additionally Article 13(3) of the Rules of Procedure of the Boards of Appeal (RPBA) specifies that such an amendment should not be admitted if it raises issues which the board or the other parties cannot be expected to deal with without adjournment of the oral proceedings.

4.3 Concerning the first of these criteria, the appellant has argued that the amendment could not have been filed earlier because the argumentation in the decision under appeal relating to the definition "*electrical device comprising a transformer*" was not clear. The board does not find this argument convincing for two reasons. Firstly, it concerns only the first of the two main amendments, and thus provides no reason why the amendment moving the definition that the dielectric fluid is biodegradable was only made at this stage of the procedure, given that the objection to this definition was raised in the grounds of opposition of respondent II (then opponent 2) filed with letter of 17 July 2006. Secondly, even if the wording of the decision under appeal might be considered to be unclear

in the manner indicated by the appellant, that does not alter the fact that also this objection was raised clearly in the grounds of opposition of respondent II. The board therefore concludes that these amendments could have been presented earlier in the appeal procedure, or indeed during the procedure before the opposition division (c.f. Article 12(4) RPBA).

4.4 The amendment moving the definition that the dielectric fluid is biodegradable can be understood in two different ways. One possibility is that it represents merely a linguistic rearrangement, with no change in meaning. If that is the case, then this amendment would have to be considered as not representing a serious attempt to overcome the objection raised in this respect. The other possibility is that it does represent a change in the scope of the definition, in which case this would raise the new question as to whether it results in a contravention of Article 123(3) EPC. Since this is an entirely new issue in the procedure, the board considers that Article 13(3) RPBA would apply in this case.

4.5 Thus, of the three criteria identified in paragraph 4.2 above, neither of the main amendments in this request satisfies the first, and the second amendment (the moving of the definition that the dielectric fluid is biodegradable), depending on how it is interpreted, fails to satisfy either the second or the third. The board therefore considered it appropriate to make use of its discretion under Articles 12(4) and 13(3) RPBA to not admit this request into the proceedings.

5. Thus, none of the appellant's admissible requests is allowable, so that the appeal has to be dismissed.

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

U. Bultmann

M. Ruggiu