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D E C I S I O N
of 11 April 2006

Case Number: T 0877/04 - 3.3.10

Application Number: 97945225.7

Publication Number: 0937019

IPC: C07C 29/147

Language of the proceedings: EN

Title of invention:

Method for preparing perfluorocarbon-substituted methanols

Applicant:

Exfluor Research Corporation

Opponent:

-

Headword:

Perfluorocarbons/EXFLUOR

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

"Amendment (not allowable) - inadmissible generalisation of structural element of individual compound - generic disclosure does not reveal a specific group covered thereby"

Decisions cited:

T 0288/92, T 0680/93

Catchword:

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Case Number: T 0877/04 - 3.3.10

D E C I S I O N
of the Technical Board of Appeal 3.3.10
of 11 April 2006

Appellant:

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Representative:

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Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 27 February 2004
refusing European application No. 97945225.7
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. Freimuth
Members: P. Gryczka
P. Schmitz

Summary of Facts and Submissions

- I. The present appeal lies from the decision of the Examining Division posted on 27 February 2004 refusing the European patent application No. 97 945 225.7 (International publication No. WO 98/12163, European publication No. 937 019).
- II. The Examining Division held that the amended set of claims submitted by the Applicant after the issuance of the communication under Rule 51(4) EPC had been filed at a very late stage of the proceedings and did not ensure the validity of the claims, but on the contrary rendered the claimed subject-matter unpatentable. Thus, the admission of this request into the proceedings was refused under Rule 86(3) EPC. Since there was no text agreed by the Applicant and allowed by the Examining Division, the application was refused pursuant to Articles 113(2) and 97(1) EPC.
- III. With a communication dated 2 January 2006, the Board informed the Appellant (Applicant) that it was highly questionable whether the amendment made to claim 1 as filed with the grounds of appeal, i.e. the feature that "one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety", could directly and unambiguously be derived from the application as filed.
- IV. With letter dated 9 March 2006, the Appellant filed an amended set of six claims as sole request, superseding all previous requests. Claim 1 of said request reads as follows:

"1. A perfluorocarbon methanol compound selected from the group consisting of:

- (i) a perfluoro 1H,1H,nH-alkyl-1,n-diol in which the alkyl moiety includes from 3 to 15 carbon atoms, and n is an integer from 3 to 15;
- (ii) a perfluoroalkyl methanol compound represented by the formula $\text{HOCH}(\text{R}'_f) - (\text{R}'_f) - \text{CH}_2\text{OH}$ wherein R'_f is a substituted or unsubstituted perfluorocarbon moiety and R'_f is a substituted or unsubstituted perfluorocarbon moiety; and
- (iii) a perfluoroalkyl dimethanol compound represented by the formula $\text{R}'_f - \text{C}(\text{R}'_f) (\text{CH}_2\text{OH})_2$, wherein R'_f and R'_f are each independently a substituted or unsubstituted perfluorocarbon moiety, **or one of R'_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety.**" (emphasis added).

V. Oral proceedings took place on 11 April 2006 before the Board in the absence of the duly summoned Appellant (Rule 71(2) EPC).

VI. The Appellant argued in writing that the amendment to claim 1, paragraph iii) indicating that "one of R'_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety" could be derived from the process described in the application as filed and thus fulfilled the requirements of Article 123(2) EPC. The claimed dimethanol compounds were prepared from the diesters $\text{R}''_f\text{C}(\text{O})\text{OCF}_2\text{R}'_f\text{CF}_2\text{OC}(\text{O})\text{R}''_f$ obtained by esterification of a diacid of formula $\text{HOC}(\text{O}) - \text{R} - \text{C}(\text{O})\text{OH}$,

followed by perfluorination. "One of ordinary skill in the art" would clearly see that when R of the starting diacid compound HOC(O)-R-C(O)OH was an alkyl substituted at its 1-position, the 1-position of the alkyl was a tertiary carbon which would be implicitly substituted with a hydrogen atom. After esterification and upon fluorination, this hydrogen atom would necessarily become a fluorine atom corresponding to one of R_f and R'_f in the final dimethanol compounds. This amendment did not require to revisit the assessment of novelty and inventive step and should be allowed under Rule 86(3) EPC.

VII. The Appellant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 6 submitted with the letter dated 9 March 2006 as sole request.

VIII. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

Amendments

2. Claim 1 was amended, *inter alia*, by adding in the definition of the perfluorocarbon dimethanol compound represented by the formula $R_f\text{-C}(R'_f)(\text{CH}_2\text{OH})_2$, the embodiment that "one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety" (claim 1, (iii)).

- 2.1 In order to determine whether or not an amendment offends against Article 123(2) EPC it has to be examined whether technical information has been introduced which a skilled person would not have objectively and unambiguously derived from the application as filed (see decisions T 288/92, point 3.1 of the reasons; T 680/93, point 2 of the reasons; neither published in OJ EPO).
- 2.2 According to the application as filed in the formula $R_f-C(R'_f)(CH_2OH)_2$, R_f and R'_f exclusively represent each independently a substituted or unsubstituted perfluorocarbon moiety. They can each independently be an unsubstituted or substituted, monovalent, perfluorinated, alkyl or alkenyl organic radical having one to twenty fully fluorinated carbon atoms, which radical can be interrupted by divalent oxygen or sulfur atoms (page 6, lines 8 to 13; original claims 17 and 18). However, the general disclosure that "one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety" is not mentioned in the application as filed.
- 2.3 The application as filed discloses two specific compounds, namely 2-fluoro-2-perfluorooctyl-1,3-propanediol and 2-fluoro-2-perfluorobutyl-1,3-propanediol, which fulfil the requirement freshly introduced in claim 1 that "one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety" (page 16, lines 19 and 20; second and third compound of original claim 12).

Thus, it has to be established whether or not those particular individual compounds form a proper basis for generalising their particular substitution pattern to any compound covered by the definition (iii) of claim 1 that "one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety".

In these two individual compounds the substitution pattern that one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety is only disclosed for two particular unsubstituted perfluorocarbon moieties, namely for a perfluorooctyl and a perfluorobutyl moiety. However, as described in the application as filed the generic term "substituted or unsubstituted perfluorocarbon moiety" covers a large number of possible substituents (page 6, lines 8 to 13, 20 to 34; original claim 18).

To generalise the two specific combinations of the groups R_f and R'_f present in those two compounds, namely a F atom in combination with a perfluorooctyl group or with a perfluorobutyl group, to all the other meanings covered by the expression "substituted or unsubstituted perfluorocarbon moiety", provides the skilled person with technical information which is not directly and unambiguously derivable from the application as filed. Therefore, the original disclosure of those two individual compounds cannot support the generalisation indicated in claim 1, paragraph (iii) which results in claiming compounds wherein when one of R_f and R'_f is F, the other is any substituted or unsubstituted perfluorocarbon moiety.

2.4 The Appellant argued that the feature introduced in claim 1 "that one of R_f and R'_f is F and the other is a substituted or unsubstituted perfluorocarbon moiety" could be derived from the method of production of the perfluoroalkyl methanol compounds with a terminal $-CH_2OH$ group disclosed on page 12, line 31 through page 13, line 23 of the application as filed.

The Appellant's argumentation is based on a precondition with regard to the chemical structure of the group R in the starting diacid, namely that this group is an alkyl group substituted at its 1-position thereby forming a tertiary carbon atom. In the application as filed the group R is defined as the non-fluorinated analogue of the group R_f (page 13, lines 8 and 9), the group R_f being defined as a perfluoroalkylene or perfluoroarylene group (page 13, line 1). The specific structure of the group R having a tertiary carbon atom at its 1-position, on which the Appellant relies, though falling under the generic term perfluoroalkylene, is as such not specifically disclosed in the application as filed. However, as a general rule, a generic term does not reveal each and every specific structural group to the skilled person which is covered thereby. Thus, in the present case the generic term "perfluoroalkylene group" does not disclose, either explicitly or implicitly, the specific alkyl group substituted at its 1-position with a tertiary carbon atom. Already for this very reason the Appellant's argument is devoid of merit.

2.5 The Board concludes that the subject matter of claim 1 as amended extends beyond the content of the application as filed, thus, contravening the provisions

of Article 123(2) EPC. In these circumstances, the Appellant's sole request is not allowable and must be rejected.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

C. Moser

R. Freimuth