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Aktenzeichen / Case Number / N° du recours : T 150/87 - 3.3.2

Anmeldenummer / Filing No / N° de la demande : 80 304 093.0

Veröffentlichungs-Nr. / Publication No / N° de la publication : 30 096

Bezeichnung der Erfindung: Detergent composition

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : C11D 17/00, C11D 3/06

ENTSCHEIDUNG / DECISION

vom / of / du 19 April 1988

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /

Titulaire du brevet :

Imperial Chemical Industries plc

Einsprechender / Opponent / Opposant :

Henkel KGaA
Unilever N.V.

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Articles 56, 111(1) and 123(2) and (3) EPC

Kennwort / Keyword / Mot clé :

"Amended claims filed at the appeal stage"
"Remittal to the Opposition Division"

Leitsatz / Headnote / Sommaire



Case Number : T 150/87 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal
of 19 April 1988

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Decision under appeal : Decision of the Opposition Division of the European Patent Office dated 13 January 1987 and notified on 26 February 1987 revoking European patent No. 30 096 pursuant to Article 102(1) EPC

Composition of the Board :

Chairman : P. Lançon
Members : G. Szabo
R. Schulte

Summary of Facts and Submissions

- I. European patent No. 30 096, granted on 5 October 1983 in response to application No. 80 304 093.0, was revoked by the Opposition Division in a decision dated 13 January 1987 and notified on 26 February 1987. The decision was based on three requests submitted by the proprietor, i.e. a main request filed on 3 December 1984 and first and second auxiliary requests filed on 16 October 1985 and 27 May 1986, respectively. The amended main claims in these requests read as follows:-

Main request, dated 3 December 1984.

"A liquid detergent composition which comprises a dispersion of solids comprising at least one builder and at least one bleach, the average particle diameter of the solids being at most 10 μm in a substantially water free non-ionic liquid surfactant which composition has a pour point of less than 10°C, the composition being free from dispersants for the solids and free from soaps."

Auxiliary request 1, dated 16 October 1985.

"A liquid detergent composition which comprises a dispersion of solids comprising at least one builder and at least one bleach and which is produced by mixing the ingredients and milling them, the average particle diameter of the solids of the composition being at most 10 μm in a substantially water free non-ionic liquid surfactant which composition has a pour point of less than 10°C, the composition being free from dispersants for the solids and free from soaps."

Auxiliary request 2, dated 27 May 1986.

"A process of producing a liquid detergent composition which comprises a dispersion of solids comprising at least one builder and at least one bleach, the average particle diameter of the solids of the composition being at most 10 μm in a substantially water free non-ionic liquid surfactant which composition has a pour point of less than 10°C the composition being free from dispersants for the solids and free from soaps, in which the ingredients are mixed together and milled."

II. The following documents were, inter alia, considered during the opposition procedure:

- (1) US-A-3 169 930
- (2) DE-A-1 279 878
- (5) DE-A-2 825 218
- (6) NL-A-7 106 117
- (7) DE-A-2 233 771.

III. The stated grounds for the revocation were, in relation to the product claims forming the main and first subsidiary requests, that pourable liquid detergent compositions of the type claimed, but without bleach, had been known from document (1) according to which a particulate binder was precipitated in colloidal form in a liquid detergent, and further mechanically produced particles of builder of greater than colloidal size could be added without upsetting the stability of the dispersion thus formed. It would have been obvious to add such further particles in the form of bleach with the same size requirement. Thus the main request and first subsidiary request were held not allowable for lack of inventive step.

The process claim forming the second auxiliary request was held to contain subject-matter which was novel and (without reasoning) inventive, but was refused on the ground that there was a risk through adoption of a new claim category (process instead of product) of contravening Article 123(3) EPC.

- IV. The Appellant lodged a Notice of Appeal against the decision on 28 April 1987, the fee being paid on the same day, and filed a Statement of Grounds on 11 June 1987.

Oral proceedings were held before the Board on 19 April 1988.

- V. At the oral hearing the Appellant submitted a single request replacing his previous three requests. Claim 1 of the new request reads as follows:

"A liquid detergent composition which comprises a dispersion of solids comprising at least one builder and at least one bleach and the mean diameter of the solids of the composition being at least 2.5 μm and at most 10 μm in a substantially water free non-ionic liquid surfactant which composition has a pour point of less than 10°C, the composition being free from dispersants for the solids and free from soaps."

- VI. The Appellant submitted in the Grounds for Appeal and at the oral hearing substantially the following arguments:-

- (i) In document (1) there was no mention of bleach among the many possible additives disclosed, and the association of the process with one or more distillation steps represented a strong prejudice against adding an unstable oxidising agent such as a bleach;

- (ii) Although the presence of bleach in liquid compositions such as disclosed in (1) had been a long felt want, the many attempts in the art in the meantime had resorted to quite different approaches to achieve this, as evidenced by documents (2) and (6);
- (iii) There was never any reason or incentive to add a bleach to the ready formed dispersions in (1) instead of a further particulate builder. The process taught in the citation was elaborate, expensive and as far as was known, had never been commercially realised, whereas according to the patent-in-suit all the desired components including the bleach could be simply ground together to achieve a fully stable dispersion in a neat and simple way. It was surprising that the larger, i.e. non-colloidal particles to which the compositions were now limited by the introduction of the threshold mean particle diameter of 2.5 μm feature, could be stabilised in this way.

VII. The Respondents submitted the following arguments:

- (i) The only reason that (1) did not mention bleach as an additive - it was an obviously desirable component of such compositions - was because of the commercial peculiarity that bleach was habitually added separately "over the side" during domestic machine washing in the USA;
- (ii) Bleach containing dispersions of the kind claimed were disclosed in documents (5) and (7) wherein (5) contained whole traits which were identical with the patent-in-suit but used a silica dispersant, and (7), recognising the problems caused by silica,

dispensed with the latter to form a stable "liquid" dispersion, using a colloid mill, whose effect would be to reduce the solids particle size down to a size similar to that in the patent-in-suit.

- (iii) The mean particle diameters referred to in the request were irresolubly ambiguous since the basis of the calculation (number, weight or volume) was not stated.

VIII. Further submissions were received from all parties shortly before the oral hearing, in the form of evidence concerning the rheological behaviour of dispersed systems, starting with the submission of the Appellant on 18 March 1988 and finishing with a submission of Respondent II dated 12 April 1988, i.e. one week before the date scheduled for the oral hearing and citing five new documents.

In view of the lateness and lack of relevance of these submissions to the technical problem arising, these submissions were excluded from consideration under Article 114(2) EPC.

IX. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main claim submitted during the oral proceedings before the Board.

The Respondents requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. No formal objection can be raised to the amended main claim since its features are supported in the description. The apparently ambiguity of the reference to the pour point in the original claim has already been satisfactorily resolved by the first instance. Furthermore, it is understood that the mean particle diameter is based on the average volume of the particles in this particular art.

The limitation to 2.5 μm as the minimum average size is specifically supported by the Example (cf. page 3, line 31). It appears that the relevance and the effect of the particle size limit taken from the example is not inextricably linked to other specific parameters (cf. Lead alloys/SHELL, OJ 10/1984, 481). The character of the particle size range may not be irrelevant to the inventive step and the suggested amendment should therefore be allowable. The specific disclaimer with regard to the use of soaps, in addition to the exclusion of dispersants in general, clarifies a possible source of misunderstanding, in view of soaps also being used in this art as anionic detergents. Soaps were mentioned as optional components (cf. page 2, line 57), and the patentee should be allowed to disclaim their use in order to render the amended claim clear in its meaning. The new claim, therefore, complies with Articles 123(2) and (3) EPC.

3. The patent relates to a pourable liquid detergent composition comprising a builder and a bleach in a finely dispersed solid form. The closest state of the art is, in the opinion of the Board, document (1), which describes a

composition with a particular builder in a colloidal form to which other particles of greater than colloidal size could be added without upsetting the stability of the dispersion. The disclosure specifically recommends that the colloidal consistency of the particles be generated from a non-colloidal dimension by removing the water content of the dispersion by distillation (cf. (1), column 3, lines 56-64). Stability of the dispersion is associated with the resulting colloidal state (Ibid, lines 64-66). About 50% of the builder particles are below 1.0 μm in size. It is important that the added mechanically produced builders of the size 25 to 30 μm are then prevented from settling by the so established colloidal dispersion system (Ibid, column 4, lines 8-10).

4. The technical problem naturally arising from this state of the art calls for an improvement or broadening of the cleaning effect without upsetting the stability of the dispersion. The solution of the problem characteristically involves the use of larger than colloidal size particles as builders, i.e. from 2.5 to 10 μm , and the addition of a solid bleach in a similar particle size. Such composition, according to the Example, achieves a stability for three months and a satisfactory washing performance to which the presence of the bleach must have contributed. Apart from that, the claimed composition eliminates the need for colloidal particles altogether and, in particular, the requirement of converting the material from a non-colloidal state to a colloidal one by distillation. In spite of the elimination of conditions which were allegedly responsible for the dispersion of larger size builders added after the distillation, the presence of added bleach does not upset the stability of the system. The performance of the composition according to the patent

has not been challenged by the Respondents and it is therefore credible that the suggested technical problem has been solved by the claimed composition.

5. The particular combination of features of the amended main claim is not disclosed in (1), since the requirement for a substantially non-colloidal particle system in the patent is incompatible with the colloidal composition according to the citation which is also silent about the addition of bleaches. Whilst document (5) mentions all the necessary components, it requires a dispersant to maintain stability. The present subject-matter is therefore novel in respect of these citations and others, raised in the proceedings, over which there are additional distinctions in the claim under consideration.
6. As to the inventive step, it is important to note that the first instance recognised this in respect of the second auxiliary request representing a process claim for producing a composition which is the one defined in the first auxiliary request. This is evident from the identity of features involved. Its rejection in view of a suggested "risk" of non-compliance with Article 123(3) EPC in consequence of the category change, is no longer an issue in these appeal proceedings, but the fact that an invention was recognised, albeit without reasoning, cannot be disregarded in the circumstances.
7. It is not known to the Board why exactly the process would have been considered as inventive by the Opposition Division, since this conclusion could not be based on the character of the direct product which was rejected as obvious. Normally, such situations imply that the process itself has an effect which is not dependent on the status of the product, i.e. its novelty or inventive character.

Since the relevant process features, such as milling and mixing, appear to be trivial, and there was no convincing evidence that any difference between colloidal precipitation and colloidal milling would influence the properties of the product, there is no apparent basis for the distinction and the reasons for the inventive step recognised by the first instance remain unknown.

8. However, the amended new main claim shifts the emphasis from the manner of particle size reduction, i.e. milling, to the actual range of the resulting size. Although this creates a new situation quite late in the proceedings, the Board has no objection to this attempt to find a claimable subject-matter. This is because of the unfairness of the situation to the Appellant who was informed about the existence of an inventive matter but was rejected on formal grounds without explanations as to the inventive step. In any case, if the manner of physical size reduction had some relevance to stability and to the inventive step, a distinction from precipitated colloidal material is also represented by the claim now on file. The exclusion of the small particle range may also be relevant for the reason that normally less stability is expected with larger particles, other conditions being equal. Whilst there may be arguments to the contrary, it would have been unfair to confront the Respondents with a claim carrying a new distinction, without giving them a proper chance of challenging its validity after proper consideration. Thus, the Board prefers to give an opportunity to the parties to investigate the possible inventive character of the amended product claim before the instance which discovered and indicated the potential existence of an invention in the first place.

Order

For these reasons, it is decided that:

1. The impugned decision is set aside.
2. The case is remitted to the Opposition Division for further prosecution on the basis of the main claim submitted during the oral proceedings.

The Registrar:

The Chairman:

F.Klein

P.Lançon