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D E C I S I O N
of 19 October 2004

Case Number: T 0003/03 - 3.3.6

Application Number: 93905284.1

Publication Number: 0629231

IPC: C10L 1/02

Language of the proceedings: EN

Title of invention:
Additives for oils

Patentee:
Infineum USA LP

Opponent:
Clariant GmbH

Headword:
Cold flow Additives/INFINEUM

Relevant legal provisions:
EPC Art. 123(2), 54(3)

Keyword:
"Main request: admissibility of amendment - no; no generalisation of an effect obtained for particular embodiments"
"First auxiliary request: novelty - yes; use in a different process - process of a prior art document according to Article 54(3) EPC requiring a particular process step excluded by means of a disclaimer"

Decisions cited:
-

Catchword:
-



Case Number: T 0003/03 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 19 October 2004

Appellant: Infineum USA LP
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 24 October 2002
revoking European patent No. 0629231 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P. Ammendola
Members: G. Dischinger-Höppler
J. H. Van Moer

Summary of Facts and Submissions

I. This appeal is from the decision of the Opposition Division to revoke European patent No. 0 629 231 relating to additives for oils. The decision was based on amended sets of claims according to a main request in two versions and an auxiliary request.

In one embodiment of both versions of Claim 1 of the main request "a composition" was claimed comprising a major proportion of an oil consisting essentially of alkyl esters of fatty acids derived from vegetable or animal oils or both, in admixture with a minor proportion of animal oil cold flow additive which comprises a polar, organic, nitrogen-containing wax crystal growth inhibitor; provided that said composition does not comprise mixtures of polymeric esters or copolymers of esters of acrylic and/or methacrylic acid derived from alcohols possessing 1 to 22 carbon atoms.

Claim 1 of the auxiliary request contained in one embodiment "a method of modifying the wax crystal growth properties" of an oil as defined in Claim 1 of the main request(s), comprising admixture with a minor proportion of an additive as defined in Claim 1 of the main request(s), with the same proviso concerning (meth)acrylic acid esters and the proviso that the modified wax crystals are not filtered off.

II. A notice of opposition had been filed against the granted patent, wherein the Opponent sought revocation of the patent on the grounds of Article 100(a) EPC for lack of novelty and lack of inventive step

(Articles 52(1), 54(2) and 56 EPC). The opposition was based inter alia on the following document

D2: EP-A-0 543 356.

During the opposition proceedings, the Opposition Division drew attention to documents referred to in D2, inter alia to document

D5: US-A-3 309 181.

III. In its decision, the Opposition Division held that the subject-matter of Claim 1 of the then pending requests was not novel in view of D2 considering the teaching of D5 which was incorporated in D2 by reference. Concerning the main request(s), it was held that D2, by referring to D5, recommended ethylene/vinylacetate copolymers (EVA) which were polar, organic, nitrogen-containing compounds in accordance with the claimed subject-matter as cold flow additives in oils like rapeseed methylester oil (RME). Concerning the auxiliary request, it was held that D2 encompassed a process wherein filtering was irrelevant.

IV. This decision was appealed by the Patent Proprietor (hereinafter Appellant) who filed amended claims in a new main and two auxiliary requests. The Opponent (hereinafter) Respondent submitted further evidence and arguments in reply.

V. Upon requests made by the parties, oral proceedings before the Board of Appeal were held on 19 October 2004 in the course of which the Appellant filed amended sets

of claims in a new main request (Set C) and in two auxiliary requests (Sets D and E).

Independent Claim 1 of the main request reads:

"1. The use of a mineral oil cold flow additive, for modifying the wax crystal growth properties of an oil consisting essentially of alkyl esters of fatty acids derived from vegetable oils, thereby improving the filterability of the oil as measured by the Cold Filter Plugging Point test, the additive comprising one or more of the following:

- (i) a polyoxyalkylene ester, ester/ether or a mixture thereof;
- (ii) an ethylene/unsaturated ester copolymer; and
- (iii) polar, organic, nitrogen-containing wax crystal growth inhibitor;

provided that said additive does not comprise mixtures of polymeric ester or copolymers of esters of acrylic and/or methacrylic acid derived from alcohols possessing 1 to 22 carbon atoms."

Independent Claim 1 of the first auxiliary request (Set D) differs therefrom in that the term "thereby improving the filterability of the oil as measured by the Cold Filter Plugging Point test," has been omitted whilst the following has been added at the very end of the claim:

"excluding the use in a process for preparing compositions having improved low temperature properties for use as fuels or lubricating agents, based on esters of long-chain fatty acids obtained from natural sources with mono-valent C₁-C₆ alcohols wherein

- (a) additives known as such which are used for improving the low temperature properties of mineral oils are added in amounts of 0.0001 to 0.1 wt.%, based on the long chain fatty acid ester,
- (b) the composition thus obtained is cooled to a temperature below the Cold Filter Plugging Point, as measured according to DIN 51 458, of the long-chain fatty acid ester without additive and
- (c) the resulting precipitates are separated off."

Claim 1 of the second auxiliary request (Set E) differs from that of the main request in that the term ", as a cold flow additive," is added between "The use" and "of a mineral oil" and in that the feature "thereby improving the filterability of the oil as measured by the Cold Filter Plugging Point test" has been omitted.

In each request the respective independent claim is accompanied by seven dependent claims relating to specific embodiments of the subject-matter of Claim 1.

VI. The Appellant orally and in writing submitted the following arguments:

- The amendments made to the claims of the new requests were allowable under Article 123(2) and

(3) EPC. In particular, the feature "thereby improving the filterability of the oil as measured by the Cold Filter Plugging Point test" introduced into Claim 1 of the main request (Set C) was disclosed in the application as filed as the only method of measuring the wax crystal growth properties.

- Document D2 was prior art under Article 54(3) EPC and disclosed a process wherein the additive was used as a dewaxing aid since it included a step for removing wax by precipitation and filtration. In contrast, according to the claimed subject-matter, the additive was used for the different purpose of modifying the shape of the wax crystals, i.e. as a cold flow additive, implying the different technical effect that precipitated wax could be left in the oil. Therefore, the subject-matter claimed in the new requests was novel over document D2.

VII. The Respondent submitted in essence the following arguments:

- The amendments made to Claim 1 of the main request were not allowable since the Cold Filter Plugging Point (CFPP) was only mentioned in the examples of the application as filed. The improvement shown for the particular additives used therein could not be simply generalised without violating the provisions of Article 123(2) EPC.
- The claimed subject-matter was not novel in view of document D2, even in the case of the first

auxiliary request (Set D) wherein a final filtering step was excluded, since the effect of modifying the wax crystal growth properties took place beforehand.

VIII. The Appellant requested that the decision under appeal be set aside and that the case be remitted to the First Instance for further prosecution on the basis of the main, first or second auxiliary requests filed during the oral proceedings.

The Respondent requested that the appeal be dismissed.

Reasons for the Decision

Main request

1. *Amendments*

1.1 Article 123(2) EPC prohibits amendments of a European patent which result in the extension of its subject-matter beyond the content of the application as filed. It is established case law of the Boards of Appeal that this content only encompasses what is directly and unambiguously disclosed in the application as filed, either explicitly or implicitly (see the Case Law of the Boards of Appeal of the EPO, 4th edition, III.A.3.3).

1.2 In the present case, the Respondent objected under Article 123(2) EPC to the introduction into Claim 1 of Set C of the feature "thereby improving the

filterability of the oil as measured by the Cold Filter Plugging Point test".

- 1.3 This feature is originally disclosed in the last three lines on page 21 of the application as filed which belong to the only example given. According to this example three additives (A, B and C) consisting of one or two different ethylene/vinyl acetate copolymer(s), i.e. additives according to type (ii) of Claim 1, were dissolved in samples of the same rapeseed methyl ester (RME) fuel. The CFPP was measured thereafter and compared with the CFPP of untreated fuel. In all three instances the CFPP is shown to be improved, i.e. decreased, by the addition of the additive.

- 1.4 The feature in question is, thus, undoubtedly originally disclosed for the particular embodiments of the example. Apart from the example, the term "CFPP" is not mentioned in the application as filed. Therefore, the new feature is not explicitly disclosed in relation with the other additives covered by Claim 1, in particular additives (i) and (iii). Therefore, it has to be assessed whether these embodiments can be directly and unambiguously derived from other portions of the disclosure of the application as filed, or in other words, whether a person skilled in the art would consider, e.g. from his common general knowledge, the new feature as necessarily implied in combination with all additives covered by Claim 1.

- 1.5 The Appellant agreed that the effects of the wax crystal growth properties did not always concern the low temperature filterability but could also influence other low temperature characteristics of fuels such as

their pour points (PP). Thus, a modification of those properties would not necessarily improve the filterability. In the Appellants opinion, it was however evident for those skilled in the art that in the context of the application as filed the modification of the wax crystal growth properties of the oil resulted in an improvement of the filterability as measured by CFPP since this was the only test used in the examples for measuring the technical effect achieved according to the claimed invention. The invention was, therefore, directed to such a modification of the wax crystal growth properties of the oil which resulted in an improvement of the filterability at low temperatures and it was unambiguously clear that it was this improvement which was achieved by all embodiments of the invention.

1.6 The Board is not convinced by this argument for the following reasons:

1.6.1 The requirements of Article 123(2) EPC would not be violated if there was evidence that the improved filterability was simply the outcome of the claimed use of a mineral oil cold flow additive in oil derived from vegetable material as defined in Claim 1. In this case, the amendment would, however, be redundant and not allowable under the conciseness aspect of Article 84 EPC, since it would not contain any technical contribution to the features already present in Claim 1. It would further not be occasioned by grounds of opposition as specified in Article 100 EPC and therefore, not allowable under Rule 57(a) EPC.

1.6.2 In contrast, the Appellants arguments imply that the feature relating to the modification of the wax crystal growth properties is functional in the sense that different effects, i.e. different cold flow characteristics, can be achieved purposively via different modifications of the crystal growth properties during the use of a mineral cold flow additive, namely improved filterability as measured by the CFPP test and/or improvement of the PP. In this case, however, results obtained for particular embodiments cannot be generalised since it depends on the particular circumstances of the use, including the type of the additive used, whether or not filterability is improved.

1.6.3 Whilst it has been shown in the only example of the application as filed that low temperature filterability can be improved if particular additives of group (ii) are used, no basis is present for such an effect in relation with the other types of additives mentioned in Claim 1.

1.7 The Board, therefore, concludes that the amendment made to Claim 1 of the main request is not allowable under Article 123(2) EPC.

First auxiliary request

2. *Amendments (Articles 84 and 123 EPC)*

The Board is satisfied that no problems under Article 84 have been introduced by the amendments made and that the claims comply with the requirements of Article 123(2) and (3) EPC. In particular, the

disclaimer excluding the use of the additive in a particular three step process does not contravene the provisions of Article 123(2) EPC since it correctly excludes in accordance with the requirements set forth in decision G 1/03 of the Enlarged Board of Appeal (OJ EPO, 2004, 413, reasons no. 3 and headnote) the process disclosed in D2 which is a prior art to be considered under Article 54(3) EPC only.

The Board notes that no objections have been made by the Respondent with respect to the amendments made.

3. *Novelty*

3.1 In spite of the above disclaimer, lack of novelty has been objected to by the Respondent in relation to the prior art under Article 54(3) EPC disclosed in D2.

3.2 D2 relates to a three-step process for preparing compositions having improved low temperature properties based on esters of long-chain fatty acids obtained from natural sources with mono-valent C₁-C₆ alcohols (FAE), in particular RME, for use as fuels or lubricating agents (Claim 1 in combination with column 1, lines 3 to 8). According to D2, it has been found that the addition of esters of poly(meth)acrylic acid with long chain alcohols (PAMA) which are known as additives for improving the low temperature properties, in particular the PP, of mineral oils was not sufficient to improve the low temperature properties of FAE (column 2, lines 21 to 50). However, the desired improvement of both, the CFPP and PP was attained if the addition (step a) was accompanied by a subsequent cooling of the composition obtained to a temperature below the CFPP of

the FAE (step b) and thereafter separating the resulting precipitates (step c) (column 2, line 51 to column 3, line 16). Suitable additives are, apart from the preferred PAMA, ethylene/vinyl acetate copolymers (EVA) according to D5 in which some of the acetate groups have been replaced by amine groups via transesterification with amino acids (D2, column 4, lines 47 to 49, column 5, lines 1 to 3 and 40 to 41; D5, column 1, lines 14 to 20). The Board agrees with the Opposition Division and the Respondent that those particular EVA products are additives within the meaning of type (iii) of Claim 1.

- 3.3 The Respondent argued that D2 was not limited to a three-step process but included a process merely consisting of steps a) and b) since step c) was relevant only in those cases where precipitates were formed. This was not necessarily the case in each and every instance. Moreover, comparative example 8 of D2 disclosed a process not including a separation step. In spite of the exclusion of the particular three-step process of D2, the claimed subject-matter still encompassed the use of the additive in a two step process comprising steps a) and b) of D2, i.e. in a process wherein additives known to improve the low temperature properties of mineral oils are added to fuels derived from vegetable oils (step a) and the composition thus obtained is cooled (step b).

The disclaimer, therefore, excluded only the filtering step c). Since the effect of modifying the wax crystal growth properties took place already after steps a) and b), the disclosure of D2 still anticipated the subject-matter of Claim 1.

3.4 The Board, however, shares the opinion of the Appellant that the core characteristics in D2 are three process steps, namely to add a known additive to the oil, then to produce, by a corresponding cooling step, precipitates of saturated and unsaturated fatty acid methyl esters of long chain alcohols which are known to separate from the oil at low temperatures, and thereafter remove the precipitates, e.g. by filtration (column 2, line 51 to column 3, line 16 in combination with column 6, line 52 to column 7, line 6). These process steps are, further, disclosed in all examples representing the invention of D2 (examples 1 to 7).

The Board concludes, therefore, that the invention disclosed in D2 is a three-step process.

In contrast, the information given in comparative example 8 is somewhat ambiguous in that it discloses an embodiment where RME is cooled and filtrated in the absence of an additive, giving a filtrate having a CFPP of -8 °C, but indicates that the addition of PAMA improves the CFPP to -19°C. It is, however, not clear from this example whether or not the embodiment using PAMA includes a filtration step. Apart from this ambiguity, this example anticipates the claimed subject-matter in no case since the additive used is different to those mentioned in Claim 1.

In contrast to the invention disclosed in D2, the claimed subject-matter does not require a cooling to a temperature below the CFPP of the oil or that the wax crystals are modified. What is required is a modification of the wax crystal growth properties which

means, in the Boards opinion, that the claimed use of the additive influences the properties of the oil, e.g. diesel fuel derived from vegetable material, insofar as under conditions for crystal growth, e.g. upon cooling in winter, the wax crystals grow in a manner different to that in the absence of the additive, so that the oil remains fluid at low temperatures and the wax crystals do not block the filter (see also patent in suit, page 3, lines 8 to 49).

The Board agrees with the Respondent insofar as these properties must also be obtained in the process of D2 as soon as an additive according to Claim 1 of the patent in suit is added. However, this fact has not been recognised in D2. On the contrary, for PAMA as the preferred additive in D2, it has been found that this was not the case and nothing suggests in D2 that this would be different for other known mineral oil additives. Instead, D2 teaches to precipitate and remove the wax for the purpose of obtaining oils derived from vegetable sources having good low temperature properties. Thus, the disclosure of D2 cannot be construed as containing any information that the wax could be left within the oil by omitting the filtration step.

The Board, therefore, agrees with the Appellant that D2 relates to a dewaxing process or to the use of an additive within a dewaxing process, respectively, which is deliberately excluded from Claim 1 by means of the disclaimer.

The Board, therefore, concludes that the subject-matter of Claim 1 is novel over D2 (Article 54(3) EPC).

4. *Remittal*

Although the claimed subject-matter has been found to be novel, it still has to be assessed whether it satisfies the requirement of inventive step.

In the present case, the decision under appeal was only based on the ground of lack of novelty. The issue of inventive step has not yet been considered by the Opposition Division. Therefore, the Board exercises its discretion under Article 111(1) EPC and remits the case to the first instance for further prosecution on the basis of the claims of the first auxiliary request, thereby allowing the respective request of the Appellant. No objections were raised by the Respondent.

5. Under these circumstances it is not necessary to deal with the Appellants second auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the First Instance for further prosecution on the basis of the first auxiliary request (Set D).

The Registrar:

The Chairman:

G. Rauh

P. Ammendola