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Datasheet for the decision of 28 January 2009

Case Number: T 1656/06 - 3.3.06

Application Number: 97303360.8

Publication Number: 0807676

IPC: C10L 1/22

Language of the proceedings: EN

Title of invention:
Fuel additives and compositions

Patentee:
ETHYL PETROLEUM ADDITIVES LIMITED

Opponent:
Infineum International Ltd.,IP Law Dept.

Headword:
Fuel additive/ETHYL

Relevant legal provisions:
EPC Art. 123(2), 84, 56
RPBA Art. 12, 13

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step (main request, first to third auxiliary requests): no - expected synergistic effect"
"Inventive step (fourth auxiliary request): yes"
"Late filed request - admitted"

Decisions cited:
T 0951/04

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1656/06 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 28 January 2009

Appellant: (Opponent)	Infineum International Ltd.,IP Law Dept. Milton Hill Business Park PO Box 1 Milton Hill Abingdon Oxon OX13 6BB (GB)
Representative:	Capaldi, Michael Joseph Infineum UK Limited Law Department P.O. Box 1 Milton Hill Adingdon Oxfordshire OX13 6BB (GB)
Respondent: (Patent Proprietor)	ETHYL PETROLEUM ADDITIVES LIMTIED London Road Bracknell Berkshire RG12 2UW (GB)
Representative:	Duckett, Anthony Joseph Mathys & Squire LLP 120 Holborn London EC1N 2SQ (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 31 August 2006 concerning maintenance of European patent No. 0807676 in amended form.**

Composition of the Board:

Chairman: P.-P. Bracke
Members: G. Dischinger-Höppler
P. Schmitz

Summary of Facts and Submissions

I. This appeal is from the interlocutory decision of the Opposition Division concerning maintenance of the European patent No. 0 807 676 in amended form on the basis of the then pending second auxiliary request, the independent Claims 1, 7, 9 and 10 reading:

"1. Use, to improve the lubricity of a low sulphur content middle distillate fuel having a boiling point of from 100 to 500°C, of an additive comprising:

A) oleyl ethanolamide or oleyl diethanolamide, and further comprising

B) a cold flow improver, and/or

C) an ashless dispersant,

wherein component (A) is present in the fuel in an amount of up to 500 ppm.

7. A low sulphur content middle distillate fuel which has a boiling point of from 100 to 500°C and which comprises an additive as defined in any one of Claims 1 to 6, wherein component (A) is present in the fuel in an amount of up to 500 ppm.

9. Use of oleyl ethanolamide or oleyl diethanolamide as a synergist on fuel lubricity in an additive as defined in any one of Claims 1 to 6 present in a low sulphur content middle distillate fuel having a boiling point of from 100 to 500°C, wherein said amide is present in the fuel in an amount of up to 500 ppm.

10. A method of reducing fuel pump wear in an engine which operates on a low sulphur content fuel which

method comprises operating the engine on the fuel claimed in Claim 7 or 8."

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 and 56 EPC). The opposition was based on the following documents

D1 WO-A-9533805,

D2 US-A-4 204 481 and

D3 WO-A-9417160.

III. In its decision, the Opposition Division held that the subject-matter claimed in accordance with the second auxiliary request fulfilled the requirements of the EPC. The higher ranking requests were held to be not allowable under the provisions of Article 123(2) EPC.

IV. This decision was appealed by the Opponent, now Appellant.

In the course of the appeal proceedings, the Appellant filed experimental evidence and document

D4 US-A-4 002 437.

The Proprietor, now Respondent, filed amended sets of claims in a new main and first auxiliary request under cover of a letter dated 17 May 2007 and further amended

sets of claims in a second, third and fourth auxiliary requests under cover of a letter dated 2 December 2008.

The set of claims of the main request differs from that considered allowable by the Opposition Division in that in Claims 1, 7 and 9 the term "up to 500 ppm" has been replaced by "up to 350 ppm".

The set of claims of the first auxiliary request differs from that considered allowable by the Opposition Division in that in Claims 1, 7 and 9 the term "up to 500 ppm" has been replaced by "up to 200 ppm".

The set of claims of the second auxiliary request differs from that considered allowable by the Opposition Division in that in Claims 1, 7 and 9 the term "up to 500 ppm" has been replaced by "of 15-350 ppm; component (B), when used, is present in the fuel in an amount of 100-500 ppm; and component (C), when used, is present in the fuel in an amount of 25-200 ppm".

The set of claims of the third auxiliary request differs from that considered allowable by the Opposition Division in that in Claim 1 the term "and further comprising" has been deleted, the term "and/or" has been replaced by "and" and in that in Claims 1, 7 and 9 the term "up to 500 ppm" has been replaced by "up to 350 ppm". Further, Claim 2 has been deleted, so that former Claims 3 to 10 are now Claims 2 to 9 with correspondingly amended references to previous claims.

The set of claims of the fourth auxiliary request differs from that of the third auxiliary request in that in Claims 1, 6 and 8 the term "up to 350 ppm" has been replaced by "of 15-350 ppm; component (B) is present in the fuel in an amount of 100-500 ppm; and component (C) is present in the fuel in an amount of 25-200 ppm".

V. Upon requests made by both parties, oral proceedings before the Board of Appeal were held on 28 January 2009.

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

- The Respondent's second, third and fourth auxiliary requests were filed late. Following Article 10a of the Rules of Procedure of the Boards of Appeal (RPBA) those requests should not be admitted into the proceedings, the more so as there was no reasoning as to the purpose of their filing.

- The amendments made to the claims were not allowable since they introduced non-clarity in regard of the essential features of the claims. Further, they introduced subject-matter which extended beyond the content of the application as filed due to the fact that multiple selections from the original disclosure were required in order to arrive at the now claimed subject-matter.

- The alleged synergistic effect was not convincing since the lubricity response of the additives was non-linear. This was the accepted position in

appeal case T 951/04 to which the Respondent was a party. Further, the absence of synergy was demonstrated in the Appellant's experimental data and Claim 1 did not require that all of the components (A) and (B) and/or (C) contribute to the improvement of lubricity. The technical problem solved in view of document D1 is reduced therefore to the mere provision of a suitable other lubricity additive. It was, however obvious to combine in one additive the two components (A) and (B) which were known from documents D1 and D2, the latter in combination with document D4, to improve the lubricity of low sulphur middle distillate fuel. As the provision of detergents in diesel fuel additives was also prior art, the subject-matter claimed in none of the Respondent's requests was based on an inventive step.

VII. The Respondent submitted in essence the following arguments:

- The late requests were an additional response to the Appellant's experimental data. They merely contained further limitations so that the claimed subject-matter was more distinguished from the Appellant's data illustrating the situation outside the invention and closer related with the examples of the patent in suit for which the synergistic effect had been shown.

- The amendments made to the claims met the requirements of Articles 84 and 123 EPC.

- Concerning inventive step, it was submitted that

the Appellant's data were irrelevant in regard of the amended claims in contrast to the Respondent's data in the examples of the patent in suit and in the experimental report filed during the opposition proceedings under cover of a letter dated 23 June 2006 which showed a synergistic effect. Further, the Appellant did neither substantiate its allegation that in the present case the response curve obtained by measuring the lubricity according to the High Frequency Reciprocating Rig (HFRR) test was non-linear nor the speculation that not all of the components (A), (B) and (C) might contribute to an increase in the lubricity of the fuel.

- Hence, the Respondent maintained that there was no incentive for someone skilled in the art to replace the N,N-dialkylammonium salt used in document D1 in combination with the ethylene vinyl acetate (EVA) cold flow improver by the amide species (A) in order to provide also a synergistic improvement in lubricity. On the contrary, there were numerous alternative fuel additives which could be used for replacement in search for an alternative synergistic combination. In particular, there was no incentive in the prior art that the combination of component (B) together with (A) and (C) in one additive would provide the particularly advanced improvement in lubricity shown in the examples of the patent in suit.

VIII. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of the claims according to the main request or first auxiliary request filed with letter dated 17 May 2007 or on the basis of the claims according to the second, third or fourth auxiliary requests filed with letter dated 2 December 2008.

Reasons for the Decision

1. *Main request and first auxiliary request - inventive step*

Since the Respondent's main and first auxiliary requests fail for lack of inventive step, no details need to be given concerning the requirements of Articles 123, 84 and 54 EPC.

1.1 The patent in suit and in particular Claim 1 relate to the use of an additive comprising selected compounds for improving the lubricity of low sulphur middle distillate fuel having a boiling point of 100 to 500°C, such as diesel and jet fuel having a sulphur content of at most 0.05% by weight (page 2, paragraph [0001] in combination with paragraph [0007]).

As is explained in the description of the patent in suit, environmental concerns have led to the need for low sulphur diesel and jet fuels. These show, however, a worse lubricity which causes an increased wear and failure in the fuel pumps (page 2, paragraph [0002]).

D1 also deals with the improvement of lubricity of low sulphur middle distillates having a boiling point within the range of 100 to 500°C, such as diesel and jet fuels. It identifies the same technical problem and its origin, namely excessive wear and pump failure of diesel engines due to the reduced content of sulphur, polycyclic aromatics and polar compounds after refining (page 1, lines 1 to 22 in combination with the paragraph bridging pages 2 and 3).

The Board agrees, therefore, with the parties that D1 is a suitable starting point for the assessment of inventive step.

1.2 According to D1, the above mentioned technical problem of excessive wear of diesel engines has already been solved by using as lubricity enhancer a cold flow improver since it had been observed that a cold flow improver enhances the lubricity of a low sulphur fuel (page 1, lines 23 to 24). It is mentioned that numerous classes of cold flow improvers are suitable, especially middle distillate flow improvers (page 3, lines 13 to 16).

Specifically mentioned classes are ethylene-unsaturated ester copolymers, such as ethylene-vinyl acetate (EVA) copolymers, comb polymers, polar nitrogen compounds, hydrocarbon polymers and linear compounds, e.g. polyoxyalkylene compounds (e.g. page 3, lines 17 to 29; page 4, lines 12 to 15; page 6, line 27 to page 7, line 2 and page 12, lines 1 to 7; page 12, lines 10 to 23; and page 13, last line to page 14, line 6, paragraph bridging pages 14 and 15 and page 16, lines 1 to 3) and it is indicated that one or more flow

improvers selected from one or more different classes can be used (page 16, lines 4 to 5 in combination with Claims 1 and 6).

It is apparent that the cold flow improvers mentioned in document D1 are the same as defined in the patent in suit as component (B) (see pages 3 to 5, in particular paragraphs [0019], [0020], [0024], [0032], [0040], [0041], [0049], [0053] and [0055].

In the examples of document D1 it is shown that representatives of the different classes of cold flow improvers at treat rates of 452 to 1760 ppm were able to bring the HFRR wear scar diameter of the untreated fuel from a value of 701 µm down to 486 to 192 µm as measured at 60°C (page 6, last paragraph, pages 19, 20 and page 21, results for fuel I). It is stated that certain combinations of flow improvers act synergistically in enhancing lubricity (page 22, lines 5 to 7). The effect is shown by way of example for combinations of a N,N-dialkylammonium salt cold flow improver with an EVA copolymer, ethylene-vinyl propionate (EVP) copolymer and Keroflux 3243, a commercial cold flow improver which is believed to contain the reaction product of ethylene diamine tetraacetic acid and di(hydrogenated tallow) amine in combination with an EVP copolymer (page 19, Examples 1, 2 and 4, page 20, Example 9 and pages 21 to 22, results on Fuels II and III), where the lubricity enhancing effect of the combination is more than additive when compared with the sum of the effects obtained by the single compounds at the same treat rates (pages 21 and 22, results for fuels II and III).

1.3 According to the patent in suit, it has been found that oleyl(di)ethanolamide as component (A) when used in accordance with Claim 1 in combination with the cold flow improver (B) was also able to bring about a synergistic effect on fuel lubricity (paragraph [0005]).

In view of document D1, so the Respondent argued, the technical problem to be solved can, therefore, be defined to consist in the provision of an alternative composition which also provides a synergistic increase in lubricity.

1.4 The Respondent argued that it was apparent from the examples in the patent in suit and the experimental data filed during opposition proceedings that this problem had actually been solved by the claimed subject-matter.

1.5 The Board agrees with the Respondent insofar as the experiments in the patent in suit and those filed in opposition proceedings show that the application of an additive comprising less than 50 ppm of (A), specifically oleyl diethanolamide, and 200 ppm of (B), an EVA cold flow improver, results in a lubricity enhancing effect which is more than additive, hence synergistic.

However, since the subject-matter claimed in both, the main and first auxiliary request is not limited to a particular cold flow improver or restricted with respect to any minimum amounts of (A) and (B), it covers embodiments wherein (B) may be any of the known middle distillate flow improvers (point 1.2 above) and

the components are present in very small amounts, such as e.g. 1 ppm or less.

The Board is, therefore, satisfied that the Respondent's experiments show credibly that the above technical problem is solved in those instances where Component (B) is an EVA copolymer and the components (A) and (B) are applied in amounts sufficient to improve the fuel's lubricity.

1.6 It remains to be decided whether, in view of the available prior art documents, it was obvious for someone skilled in the art to solve the above stated technical problem of providing a further additive composition suitable to synergistically improve the lubricity of low sulphur middle distillate by the means claimed, namely by adding oleyl (di)ethanolamide in combination with a cold flow improver.

1.7 Document D1 does not mention alkyl ethanolamides but indicates that known lubricity additives may be used in combination with the cold flow improvers as co-additives (page 16, lines 9 to 12).

Document D2 relates specifically to fatty acid esters of diethanolamides as lubricity enhancers in heavy and light diesel fuel (column 1, lines 31 to 37 and column 6, lines 12 to 19). It is apparent from the reference to document D4 that the term light diesel fuel stands for a low sulphur diesel fuel boiling within the range of 100 to 500 °C in accordance with the patent in suit (D2, column 1, lines 20 to 23; D4, column 4, lines 59 to 65). Particularly preferred is in

document D2 oleyl diethanolamide (column 3, lines 16 to 19).

1.8 The Respondent essentially argued that the synergistic effect was unexpected, in particular as there was no evidence showing that the HFRR response curve was non-linear in the present case.

Further, there existed numerous alternative fuel additives which could replace the N,N-dialkylammonium salt used in document D1 as the second cold flow improver in combination with the EVA cold flow improver.

Moreover, a skilled person would not have considered oleyl diethanolamide for replacing the polar nitrogen compound in document D1 since the molecular structures of these compounds were very different.

The claimed subject-matter was, therefore, not obvious, in the light of the prior art on file.

1.9 However, the Board cannot ignore the following finding in decision T 951/04 (point 2.9.3) referred to by the Appellant:

> "Concerning lubrication, as measured by the HFRR test, the parties based their approach on the HFRR response curve which correlates for a given additive in a given fuel oil the treat rate (amount) of additive with the resulting average wear scar diameter.
>
> It is characteristic for such a curve that with increasing amount of additive, there is a slight

response (decrease in the wear scar diameter) in the beginning, then a more or less sharp decrease until "saturation" of the fuel with the additive is obtained, whereas thereafter further additive addition no longer changes the wear scar diameter significantly."

It is conspicuous that in the case of the above outlined behaviour of the HFRR response curve, very small amounts of further lubricating additive may be sufficient to bring about a more than additive lubricating effect provided that the initial amount of lubricating agents present in the fuel is just not enough for a proper lubrication.

Given the above definition of the HFRR response curve, it is, as a corollary, observed in T 951/04 that compared with the ester lubricant, the weak effect of EVA on lubricity was irrelevant if the fuels lubrication properties were inadequate due to an insufficient content of the lubricant (reasons No. 2.9.6) and concluded that the skilled person would have expected an improvement of the fuel's lubrication properties at reduced costs for the ester lubricant if EVA is also added to the fuel oil (reasons no 2.10).

The Respondent did not refute the Appellant's pointer to the fact that both, the present Appellant as well as the present Respondent were amongst the five parties concerned in case T 951/04. Nor did the Respondent contest that an S-shaped response curve fitting the definition given in T 951/04 was shown in document D3 for glycerol monooleate as lubricant (page 10, Table for Fuel II).

On the contrary, the Respondent eventually agreed that the above S-shaped response curve behaviour was known in the art for certain lubricants but contended that the response curve behaviour of the lubricants used in accordance with the patent in suit was unknown.

However, considering that the existence of the S-shaped response curve behaviour in certain cases was known in the art, the Board is convinced that a skilled person would have tried also other lubricants in the reasonable expectation of a more than additive lubricating effect if applied in combination with another additive having lubricating properties in inadequate amounts for complete lubrication. In doing so, he would by simple experimentation come across the suitable amounts of lubricant needed.

Nor can the Respondent rely on the argument produced in writing that a skilled person would not have considered oleyl (di)ethanolamide for replacing the N,N-dialkyl ammonium salt used in the examples of document D1 due to the different chemical structure. The reason is, firstly, that Claim 1 is not restricted to EVA cold flow improvers but covers also the polar nitrogen compound. Secondly, the chemical structures of the cold flow improvers used in the examples of document D1 in combination also differ widely from each other (point 1.2 above). Hence, a skilled person would not derive from document D1 that a synergistic effect can be obtained only with compounds of like or similar molecular structures.

1.10 The Board concludes, therefore, that it was obvious for those skilled in the art to try oleyl (di)ethanolamide proposed in document D2 for improving the lubricity of light Diesel fuel - just as any other compound known for this purpose - in the reasonable expectation, when applied in suitable amounts, to improve the lubricity of light Diesel fuel which comprises an EVA cold flow improver of the kind disclosed in document D1 in insufficient amounts for a proper lubrication.

The skilled person would thus arrive in an obvious manner at the subject-matter claimed in the main and first auxiliary requests.

1.11 For these reasons the Board finds that the subject-matter of Claim 1 is not based on an inventive step and does not comply with the requirements of Articles 52(1) and 56 EPC.

2. *Second to fourth auxiliary requests-procedural issues*

The Respondent's second to fourth auxiliary requests were not in direct response to the statement of grounds of appeal but filed more than 18 months later, however, two months before the oral proceedings and about five weeks after summons to oral proceedings (registered letter dated 24 October 2008).

In the Appellant's view, those requests were filed in breach of Article 10a RPBA (i.e. Article 12 RPBA of the latest version as amended on 25 October 2007; see OJ EPO 2007, pages 536 ff), in particular as they were not occasioned by any further objections of the Appellant

and not accompanied by explanations concerning their purpose.

It is true that according to Article 12 RPBA, second paragraph, a party's case shall be complete after the statement of grounds of appeal or, respectively the corresponding reply. However, in the Board's judgment, Article 12 RPBA must not be read out of the context given in Article 13 RPBA (former Article 10b RPBA), which explicitly leaves it to the Board's discretion to admit and consider any later amendments to a party's case.

According to the first paragraph of Article 13 RPBA, such circumstances are in particular the complexity of the newly submitted subject-matter, the current state of the proceedings and the need for procedural economy.

In the present case, however, the limiting amendments are easy to understand. Further, the new requests were filed two months in advance of the oral proceedings, so that in the Board's opinion there was ample time for consideration, even for the Appellant. This is corroborated by the fact that the Appellant had no problems to present his arguments and that the amendments did not necessitate any delay of the proceedings.

Certainly, the new requests are not occasioned by new objections raised by the Appellant. Nevertheless, it is immediately apparent that they are the result of the Respondent's effort of better overcoming the objections raised in the Appellant's Statement of Grounds of

Appeal, by further distinguishing the claimed subject-matter from the Appellant's experimental data.

Hence, the Board exercises its discretion under Article 13(1) RPBA and admits the claims according to the second, third and fourth auxiliary request into the proceedings.

3. Second and third auxiliary requests

3.1 Since the second and third auxiliary requests fail for lack of inventive step, no details need to be given concerning the requirements of Articles 123, 84 and 54 EPC.

3.2 Inventive step - second auxiliary request

Compared with Claim 1 of the main request the feature "up to 350 ppm" has been replaced by "of 15-350 ppm; component (B), when used, is present in the fuel in an amount of 100-500 ppm; and component (C), when used, is present in the fuel in an amount of 25-200 ppm".

Nonetheless, Claim 1 covers still the embodiment of using components (A) and (B) alone, although the amounts of both have now been specified so as to include the upper and lower limits.

Considering the knowledge about the possible HFRR response curve behaviour, the Board holds, however, that a skilled person would arrive at the correct amounts where the expected synergistic effect occurs by routine experimentation but without applying any inventive activity.

3.3 Inventive step - third auxiliary request

In Claim 6, when compared with the corresponding Claim 7 of the main request, the feature "and/or" has been replaced by "and". Claim 6 relates to the fuel as such and does not require any improvement in lubricity at all.

According to Claim 6, all three components (A), (B) and (C), the ashless dispersant, are present, but no minimum amounts are required.

The Respondent argued that the synergistic effect was obtained even for very small amounts of additives. However, the argument is not based on evidence and not convincing, since it is apparent that in the case of an S-shaped HFRR response curve, a specific minimum amount of lubricant is necessary to produce an effect whereas any smaller amounts of lubricants, even when used in combination, would not improve a fuels lubricity.

Hence, it is not credible that the aforementioned technical problem of providing a further additive composition suitable to synergistically improve the lubricity of low sulphur middle distillate (point 1.6) has been solved.

In view of document D1, the actually solved technical problem therefore boils down to the provision of a further additive composition for low sulphur middle distillate. However, components (A) and (B) are known for this purpose from documents D1 and D2 (points 1.7 and 1.8). In addition, document D1 also teaches to

combine those additives with a detergent (page 16, lines 9 to 12).

The Respondent did not refute the Appellant's argument that such detergents are as a matter of principle equivalent to the component (C) which - according to the patent in suit - is well-known in the art (page 6, paragraph [0057]).

Hence, the Board concludes that the combination of components (A), (B) and (C) in a low sulphur middle distillate fuel is not based on an inventive step.

4. Fourth auxiliary request

4.1 Amendments (Articles 123 and 84 EPC)

The Board notes that compared with the claims as filed the following amendments have been introduced:

- the low sulphur fuel is now a middle distillate having a boiling point between 100 and 500°C;

- the carboxylic acid amide (A) is now restricted to oleyl (di)ethanolamide;

- it is now mandatory that the additive comprises all three components (A), (B) and (C); and

- it is now mandatory that the components (A), (B) and (C) are present in the amounts of 15 to 350 ppm of (A), 100 to 500 ppm of (B) and 25 to 200 ppm of (C).

4.1.1 The amendments are based on the original application page 2, line 22 to page 3, line 7, where the middle distillate and bio-diesel fuel are disclosed as the only examples of suitable fuels; page 9, lines 21 to 22, where oleyl ethanolamide and oleyl diethanolamide are stated to be the preferred amides (A); Claim 2, requiring that all three components are present; and page 21, lines 7 to 14, where the now claimed amounts are specified as being preferred.

The Appellant's argument that the amendments can only be derived by multiple selections from several lists in the application as filed is not convincing since apart from the selection of the middle distillate as one of a list of two components, namely middle distillate and bio-diesel, all other amendments only introduce what is originally disclosed as being preferred.

As the amendments do also not extend the protection conferred by the patent, the Board concludes that the amendments meet the requirements of Article 123(2) and (3) EPC.

4.1.2 The Appellant further produced the argument that the amendments introduced non-clarity with respect to the essential features. The argument was based on the fact that the experimental data of the Respondent filed during opposition proceedings did not show that the effect obtained was dependent on the presence of oleyl (di)ethanolamide as component (A) since the lubricant contained in addition considerable amounts of other diethanolamides, in particular of linoleic acid.

In the Appellant's view, the feature that component (A) is only oleyl (di)ethanolamide was not essential for the claimed invention.

However, the Appellant overlooks apparently that the patent in suit contains the evidence for an effect obtained with oleyl (di)ethanolamide alone which is thus essential in the now claimed combination of features.

The Board holds, therefore, that no problem under Article 84 EPC has been introduced by limiting the claimed subject-matter to oleyl (di)ethanolamide as the essential component (A).

4.2 Novelty

The Appellant did not dispute the novelty of the claimed subject-matter. In fact, none of the available prior art documents discloses a combination of features as set out in the claims. In particular, there is no additive disclosed which comprises components (A), (B) and (C) in the amounts specified in independent Claims 1, 6, 8 and 9.

Hence, the claimed subject-matter is not anticipated by the cited prior art.

4.3 Inventive step

As compared with the second auxiliary request, the independent claims of the fourth auxiliary request require that the additive comprises, in the specified

amounts, all three components (A), (B) and (C) in combination (see point IV).

The examples of the patent in suit (see in particular Table 1) show that the effect achieved by an additive containing 25 ppm of oleyl diethanolamide, 200 ppm of an EVA cold flow improver and 100 ppm of an ashless dispersant, a specific polyisobutenyl succinimide, is the same as that referred to above under 1.5, namely an improvement of the lubricity which is synergistic in the sense of more than additive when compared with the sum of the effects obtained by the single compounds. It is shown that all three components contribute to this effect (Table 1, Run No. 8 versus Runs Nos. 5 to 7).

In the Appellant's view the claims of the fourth auxiliary request still covered embodiments where no synergy is obtained. However, this view was not based on any evidence.

Thus, the Board has no reason to doubt that the above effect is indeed representative for the whole scope of the claims according to which the additive comprises 15 to 350 ppm of (A), 100 to 500 ppm of (B) and 25 to 200 ppm of (C).

Therefore, the technical problem solved in view of document D1 remains the same as stated in point 1.6 above, which is to provide a further additive composition suitable to synergistically improve the lubricity of low sulphur middle distillate.

Further, the Appellant argued that the presence of detergents was suggested in document D1 and that detergents were synonymous to ashless dispersants.

However, he has produced no arguments, let alone evidence, in regard of the ability of component (C) to contribute to the lubricity of low sulphur middle distillate when combined with both, components (A) and (B).

Hence, the Board concludes that a skilled person was not guided by the cited prior art to combine in an additive for low sulphur middle distillate the components (A), (B) and (C) in the amounts specified in the expectation of synergy with respect to the fuels lubricity.

Therefore, the subject-matter of the fourth auxiliary request is held to be based on an inventive step (Articles 52(1) and 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to maintain the patent on the basis of the claims of the fourth auxiliary request, filed with letter of 2 December 2008 and a description still to be adapted.

The Registrar: The Chairman:

G. Rauh P.-P. Bracke