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D E C I S I O N
of 17 December 2003

Case Number: T 0039/02 - 3.3.3

Application Number: 95925596.9

Publication Number: 0770098

IPC: C08F 8/32

Language of the proceedings: EN

Title of invention:
Dispersants based on succinimide additives derived from heavy polyamine used for lubricating oil

Patentee:
ExxonMobil Chemical Patents Inc.

Opponent:
The Lubrizol Corporation

Headword:
-

Relevant legal provisions:
EPC Art. 54, 84, 111(1), 123(2)

Keyword:
"Novelty - main request (no) - second auxiliary (yes)"
"Clarity - second auxiliary request (yes)"
"Amendments - first auxiliary request (inadmissible extension by deleted feature) - second auxiliary request (no extension beyond original disclosure)"
"Remittal - second auxiliary request (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0039/02 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 17 December 2003

Appellant: (Proprietor of the patent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office dated 12 September 2001 and issued in writing on 6 November 2001 revoking European patent No. 0770098 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: R. Young
Members: P. Kitzmantel
E. Dufrasne

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 0 770 098 in respect of European patent application No. 95 925 596.9 (International application number: PCT/US95/08623; International publication number: WO 96/01854) in the name of EXXON CHEMICAL PATENTS INC. (now EXXON MOBIL CHEMICAL PATENTS INC.), which had been filed on 11 July 1995 claiming a US priority of 11 July 1994, was announced on 11 November 1998 on the basis of 18 claims, independent Claims 1, 11,14 and 15 reading as follows:

"1. An oil soluble imidised additive comprising the reaction product of a functionalised hydrocarbon and a heavy polyamine, wherein said heavy polyamine has an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine."

"11. A process for producing an imidised additive comprising the steps of
a) functionalizing by halogenating, ene reacting, or free radical grafting a backbone selected from the group consisting of hydrocarbon, polymer, and polybutene with a carboxylic acid or anhydride agent; and
b) then reacting said backbone with a heavy polyamine, wherein said heavy polyamine has an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine."

"14. The use of the additive of claim 1 in a fuel or lubricant.

15. An oleaginous composition comprising the additive of claim 1.

The remainder of the claims was dependent (irrespective of their sometimes differently worded appendence): Claims 2 to 10 and 17 on Claim 1, Claims 12 and 13 on Claim 11, Claim 16 on Claim 15, and Claim 18 on Claim 14.

II. Notice of Opposition requesting revocation of the patent in its entirety on the grounds of Article 100(a) and (c) EPC was filed by The Lubrizol Corporation on 10 August 1999.

The opposition was *inter alia* based on documents

D1: US-A-3 259 578,

D2: US-A-4 234 435, and

D3: US-A-5 053 152.

III. By its decision announced orally on 12 September 2001 and issued in writing on 6 November 2001, the Opposition Division revoked the patent.

That conclusion was drawn with regard to the Patentee's request to maintain the patent on the basis of Claims 1 to 17 of the patent as granted (but without granted Claim 18) (main request) or on the basis of alternative sets of amended claims of a first, second or third auxiliary request.

(a) Claim 1 of the first auxiliary request (*Set A"+, Claims 1 to 17) differed from its granted version by insertion of the passage "is a mixture of polyalkylene amines and" between "..., wherein said heavy polyamine" and "... has an average of at least 7 nitrogens per molecule ...".

(b) Claim 1 of the second auxiliary request (*Set B"'+, Claims 1 to 16) differed from its granted version by addition to the characterisation of the polyamine of the feature "and comprises less than 1 wt.% pentamines and lower polyamines and less than 25 wt.% hexamines."

(c) Claim 1 of the third auxiliary request (*Set B"+, Claims 1 to 16) combined the amendments introduced into Claims 1 of the first and second auxiliary requests.

(d) The decision furthermore referred to a *Set A'+ and a *Set B'+ of claims.

– Claim 1 of *Set A'+ differed from its granted version by insertion of the passage "is a mixture of higher oligomers of polyalkylene amines and" between "..., wherein said heavy polyamine" and "... has an average of at least 7 nitrogens per molecule ...".

(e) Claim 1 of *Set B'+, over and above the afore-mentioned amendment in *Set A'+, comprised the additional polyamine characterisation inserted into Claim 1 of the second auxiliary request (*Set B"'+).

IV. That decision held:

(a) That the subject-matter of Claims 1 and 11 of the main request was anticipated by the disclosures of D1 and D2 because the only possible difference from the oil additives of these documents, i.e. their use of Polyamine N-400, was within the definition "heavy polyamine" of Claim 1 of the main request and did not therefore provide a distinguishing feature;

(b) that the first and third auxiliary requests contravened Article 123(2) EPC because of the suppression in the inserted feature "is a mixture of polyalkylene amines" of the term "higher oligomers" which was contained in the supporting statement of the original disclosure "a mixture of higher oligomers of polyalkylene amines";

(c) that the subject-matter of Claims 1 and 10 of the second auxiliary request was anticipated by the disclosures of D1 and D2 because the definitions of the Polyamine N-400 in these documents comprised heavy polyamines having 0 wt.% pentamines and lower polyamines and 0 wt.% hexamines and were therefore within the polyamine definition of Claim 1 of this request;

(d) that the Claims 18 of the granted patent and of *Set A'+ as well as Claim 17 of *Set B'+ contravened the requirement of Article 123(2) EPC and, as far as Sets *A'+ and *B'+ were concerned, also that of Article 123(3) EPC; and

(e) that the independent claims of *Set A'+ and *Set B'+ furthermore did not comply with the requirement of clarity according to Article 84 EPC.

(f) The decision did not comment on the relevance of document D3 and did not consider the reworking experiments contained in the Opponent's submission dated 30 August 2001, i.e. less than two weeks before the first instance oral proceedings on 12 September 2001 (paragraphs 15 and 16 of the Facts and Submissions).

V. On 8 January 2002 the Patentee (Appellant) lodged an appeal against the decision of the Opposition Division and paid the appeal fee on the same day. The Statement of Grounds of Appeal was filed on 13 March 2002.

Therein the Appellant presented arguments in respect of a main request and five auxiliary requests comprising the following sets of claims:

main request: Claims 1 to 17 of the patent as granted,

first auxiliary request: Claims 1 to 17 filed as *Set A"+ on 12 September 2001,

second auxiliary request: Claims 1 to 17 of the set of claims filed as *Set A'+ with the submission dated 28 August 2001,

third auxiliary request: Claims 1 to 16 of the set of claims filed as *Set B"'+ on 12 September 2001,

fourth auxiliary request: Claims 1 to 16 of the set of claims filed as *Set B"+ on 12 September 2001,

fifth auxiliary request: Claims 1 to 16 of the set of claims filed as *Set B'+ with the submission dated 28 August 2001.

VI. The arguments of the Appellant/Patentee presented in the Statement of Grounds of Appeal and at the oral proceedings held on 17 December 2003 may be summarised as follows:

(a) The subject-matter of the main request was novel over D1 and D2 because

(i) the statement in Claim 1 of the main request: "heavy polyamine has an average of at least 7 nitrogens per molecule ..." related to a mixture of polyamines, as was clear from the use of the word "average" and from the first paragraph of the description setting out: <"Heavy polyamine" as referred to herein includes mixtures of higher oligomers of polyalkylene ... amines ...> because the word "includes" therein must be read to mean "is defined as",

whereas

(ii) the most relevant information in D1 (column 2, line 58 to column 3, line 5; column 3, lines 17 to 40) and D2 (column 25, lines 24 to 40) concerned the preparation of lubricant additive compositions derived from "Polyamine N-400" which was a pure polyamine compound, as must be concluded

- from the disclosure in these documents of "n=1" as the number of repeating units "n" of the structural formula of the general polyamine structure there disclosed, and

- from the reaction scheme in D1 for the preparation of such polyamines according to which the formation of a product mixture was prevented by the use of protective groups for the primary amino groups of the starting diethylene triamine.

(b) Even if, arguably, it was held that Claim 1 of the main request was not restricted to mixtures of polyalkylene amines (and was therefore anticipated by the disclosures of D1 and D2 if the reference therein to "Polyamine N-400" was found to relate to a pure compound) Claim 1 of the first auxiliary request (Set A") was clearly novel over these documents because it explicitly stated that the term "heavy polyamine" related to a mixture of polyamines.

(c) Claim 1 of the first auxiliary request was also in line with Article 123(2) EPC because the amendment: "is a mixture of polyalkylene amines" was properly supported by the passage on page 1, lines 10 to 14 of the original application: "mixtures of higher oligomers of ... polyalkylene ... amines"; the suppression of the words "higher oligomers" did not lead to an extension beyond the original disclosure because the ensuing closer definition of the nature of the polyalkylene amines made these words redundant.

(d) Furthermore Article 123(2) EPC did not require that the afore-mentioned amendment should be accompanied by further features which were disclosed in combination therewith in the relevant counterpart statement on page 2, lines 6 to 9 of the patent specification because these further features had only optional character:

(i) the reference in this counterpart to "amines containing e.g., essentially no tetraethylene pentamine, small amounts of pentaethylenehexamine" related to a preferred embodiment;

(ii) the same conclusion applied to the reference in that statement to "2 or more primary amines per molecule" because it was evident from the passage on page 3, lines 27 to 28 of the specification "... but preferably polyamine oligomers ... and with 2 or more

primary amines per molecule" that this feature was part of a preferred embodiment;

(iii) similarly it resulted from the qualification "usually" in the statement on page 3, lines 45 to 48 of the specification that the reference in that statement to "more branching than conventional polyamine mixtures" did not relate to an essential feature of the claimed invention.

(e) Claim 1 of the second auxiliary request was novel over D1 and D2 for the reasons set out in subparagraph (b) above and met the requirements of Article 123(2) EPC for the reasons set out in subparagraph (d) above.

(f) This claim also complied with Article 84 EPC because the meaning of the words "higher oligomers" in the amendment "is a mixture of higher oligomers of polyalkylene amines" was explained by the ensuing features characterising the number of nitrogens and the equivalent weight per primary amine equivalent of the polyamine.

(g) The Appellant's written submissions also contained arguments in favour of the compliance of the further auxiliary requests 3 (Set B"'), 4 (Set B") and 5 (Set B') with the requirements of Article 54, 84 and Article 123(2) EPC.

(h) The Appellant objected to considering in the oral proceedings before the Board document D3, and in particular the related evidence contained in the

Opponent's letter of 30 August 2001 because D3 was not relied upon in the decision under appeal and because the Respondent's request to consider D3 as well as the letter of 30 August 2001 had only been submitted by the Respondent with its letter of 17 November 2003, i.e. about one month before the oral proceedings.

VII. The arguments of the Respondent/Opponent submitted in its letters dated 4 December 2002 and 17 November 2003 as well as at the oral proceedings may be summarised as follows:

(a) D1 and D2 were novelty destroying for the subject-matter of the main request because

(i) the structural formula of the "Polyamine N-400" in D1 (column 2, line 58 to column 3, line 5; column 3, lines 17 to 40) and D2 (column 25, lines 24 to 40) was an empirical formula describing the average composition of a polycondensation or polymerisation product (from ethanolamine/ammonia; alkylene chloride/ammonia or ethylene imine: D1 column 3, lines 6 to 9; D2 column 27, lines 17 to 23). Thus despite the information in D1 and D2 that for "Polyamine N-400" the number of repeating units "n" in the formula was "1", this commercial product, which was no longer available, must have comprised a mixture of polyamines; and

(ii) even if, arguably, it was held that - contrary to the above deliberations - the

reference in D1 and D2 to the "Polyamine N-400" should be held to relate to a pure compound whose structure corresponded to the structural formula having "n=1" repeating units as literally set out in these documents, this disclosure of D1 and D2 anticipated the subject-matter of Claim 1 of the main request; this conclusion following from the fact that the characterisation of the "heavy polyamine" in Claim 1 as having "an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine" comprised, on its plain reading, a polyamine constituted by identical molecules, each having the same structure and the same number of nitrogens;

(iii) this interpretation was in agreement with the statement on page 2, lines 6 to 9 of the patent specification: <"Heavy polyamine" as referred to herein includes a mixture of ... polyalkylene ... amines ...> (emphasis added) which showed that the meaning of the term "heavy polyamine" was not restricted to mixtures of polyamines.

(b) Claim 1 of the first auxiliary request (Set A") contravened Article 123(2) EPC because:

(i) the suppression of the words "higher oligomers" in the passage of the original application (page 1, lines 10 to 14): "mixtures of higher oligomers of

polyalkylene ... amines" which led to the amendment in said Claim 1: "is a mixture of polyalkylene amines" went beyond the original disclosure. The suppressed words, though unclear, excluded bimodal mixtures comprising a preponderant amount of polyalkylene (poly)amines having very few repeating units and a small amount of (poly)amines having very many repeating units, which could not be regarded as oligomers, even if they met the conditions of Claim 1, i.e. had an average of at least 7 nitrogens and an equivalent weight of 120-160 grams per equivalent of primary amine; and

(ii) because the amendment "is a mixture of polyalkylene amines" failed to comprise further features disclosed in combination with this feature on page 2, lines 6 to 9 of the patent specification i.e. the features that the heavy polyamine comprised at most small amounts of pentaethylenehexamine, 2 or more primary amines per molecule as well as more branching than conventional polyamine mixtures.

(c) Claim 1 of the second auxiliary request (Set A') contravened the requirements of Article 84 EPC because the words "higher oligomers" comprised by the amendment "mixtures of higher oligomers of polyalkylene amines" was unclear in that both words, "higher" and "oligomers", lacked precision; "higher" was an undefined comparative term and

"oligomers" had no generally accepted meaning in the art.

(d) Furthermore Claim 1 of the second auxiliary request contravened Article 123(2) EPC for the reasons set out in subsection (b)(ii) above.

(e) The subject-matter of Claim 1 of the second auxiliary request furthermore lacked novelty over the disclosures of D1 and D2 which comprised the use of mixtures of polyamines as well as over the disclosure of document D3. In the submission dated 17 November 2003 the Respondent in this respect referred to its opposition statement and to the submission dated 30 August 2001 and asked that, in the interests of the avoidance of a further protraction of the opposition proceedings, these should be considered at the oral proceedings before the Board.

(f) The written submissions of the Respondent also contained arguments contending the compliance of the further auxiliary requests 3 (Set A"'), 4 (Set B") and 5 (Set B') with the requirements of Article 54, 84 and Article 123(2) EPC.

VIII. The Appellant requested that the decision under appeal be set aside and that the case be remitted to the Opposition Division for further prosecution on the basis of the main request or any of the five auxiliary requests, all submitted with the Statement of Grounds of Appeal.

IX. The Respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. *Construction of Claim 1*

It is apparent from the wording of this claim that the meaning of the feature "heavy polyamine" which comprises the relative term "heavy" is restricted to the ensuing characterisation "has an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine."

2.1 In the Board's judgment, the word "average" in this definition, despite of its indispensability only in relation to mixtures of polyamines of different nitrogen content but averaging at least 7 nitrogen atoms, covers polyamine compositions constituted by polyamine molecules having identical nitrogen content; also such compositions have an average nitrogen content.

2.2 There is therefore no need to rely on statements in the patent specification, as argued by the Appellant, in order to construe a different meaning.

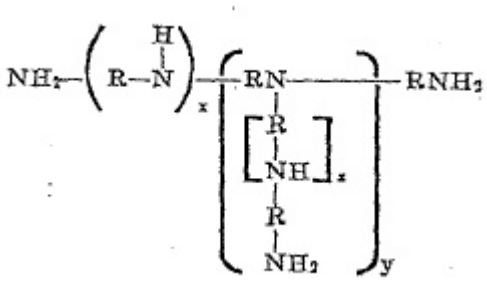
2.3 But even if, following the Appellant's respective suggestion, this was done, the only relevant disclosure in the specification (page 2, lines 5 to 9; page 3, lines 19 to 22) would not require a different interpretation, since the word "includes" in the

sentence <"Heavy polyamine" as referred to herein includes a mixture ... of polyalkylene ... amines ...> in its ordinary meaning does not restrict the significance of the term "heavy polyamine" to mixtures. There is nothing in the specification justifying a departure from the ordinary meaning of the word "include".

3. *Novelty over D1 and D2*

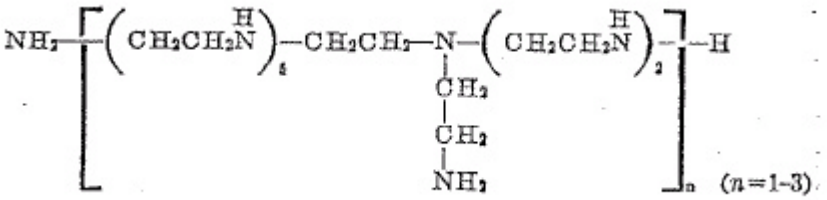
3.1 Document D1

Claim 1 of this document relates to an improved mineral lubricating oil composition comprising a major proportion of the oil and about 0.1 to 5% by weight based on the composition of a compound selected from the group *inter alia* comprising an acylated branched polyalkylenepolyamine containing at least three primary amino groups and at least one tertiary amino group and having the formula



wherein R is an alkylene group having at least two carbon atoms, x is an integer of 4 to 24, y is an integer of 1 to 6, and z is an integer of 0 to 6, formed by reacting said polyalkylenepolyamine with a compound selected from the group consisting of (i) a carboxylic acid having 7-39 carbon atoms and (ii) a precursor of said carboxylic acid capable of forming said acid in said reaction.

According to column 2, line 58 to column 3, line 5 one of the preferred polyalkylenepolyamines is the compound "Polyamine N-400" having the formula



wherein n=1.

According to this formula "Polyamine N-400" has 10 nitrogen atoms, three primary amino groups and a molecular weight of 404.

A reaction scheme for the preparation of a branched polyamine (different from "Polyamine N-400") which involves the intermediate removal of reactivity from the primary amino groups of the starting diethylene triamine by their endcapping with carboxylic acid is set out in column 3, lines 17 to 40.

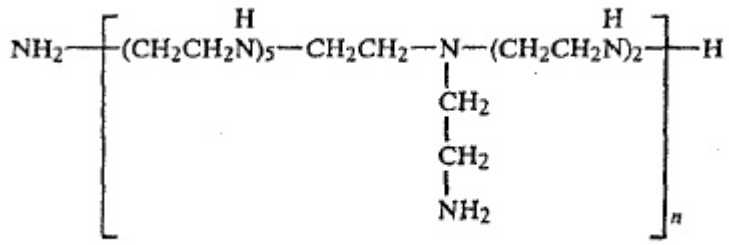
According to Table I (column 9) "Polyamine N-400" is reacted/acylated with alkenyl (C_{12}/C_{16}) succinic acid/anhydride (see Examples 9-A_1, 9-A_2, 9-A_3, 10-A_1, 10-A_2, 10-A_3).

3.2 Document D2

Claim 1 of this document relates to a lubricating composition comprising a major amount of oil and a minor amount of one or more carboxylic derivative compositions produced by reacting at least one

substituted succinic acylating agent with a reactant selected from the group *inter alia* comprising amines (a) having at least one H-N< group, wherein the substituent groups of said substituted succinic acylating agents are derived from a polyalkene.

Polyamines are a preferred class of amines (a) and among these polyamines of the formula



(n = 1-3).

are particularly exemplified. Compounds of this formula with n=1 are identified as "Polyamine N-400" (column 25, lines 10 to 40).

In Table 1 (columns 47/48) some of the amine reactants used for reaction with succinic acylating agent are characterised as "commercial mixtures of ethylene polyamines" (see footnotes a, c, d, e).

3.3 D1 and D2 are equally relevant to the present issue of novelty. Both disclose imidised additives for lubricants which are reaction products of acylated hydrocarbons and polyamines, including a compound "manufactured and sold as Polyamine N-400". The only information in both documents directly relating to the nature of this polyamine is the reference to the afore-cited general formula and the statement: "Polyamine N-400 has the above formula wherein n=1". (D1 column 2,

line 58 to column 3, line 5; D2 column 25, lines 24 to 40).

3.4 In the Board's judgment, in the absence of any further directly relevant information concerning the nature of "Polyamine N-400" the afore-mentioned disclosure can only be interpreted to relate to a polyamine compound having precisely the structure it is said to have in D1 and D2, i.e. the structure $H_2N\text{-}(CH_2CH_2NH)_5\text{-}CH_2CH_2N(CH_2CH_2NH_2)\text{-}CH_2CH_2NH\text{-}CH_2CH_2NH_2$.

This compound comprises 10 nitrogens and has an equivalent weight of about 135 grams per equivalent of primary amine.

3.5 Support for this conclusion can be found in the disclosure of a method in D1 for the preparation of pure polyamines which expressly and intentionally avoids the formation of polyamine mixtures (column 3, lines 17 to 40; cf. section 3.1 above), as well as in the statement in D2 (column 27, lines 9 to 28) referring on the one hand to the preparation "of the somewhat complex mixtures of alkylene polyamines" but also setting out: "On the other hand, quite satisfactory products can also be obtained by the use of pure alkylene polyamines" (emphases added).

3.6 This conclusion is not invalidated by the fact that "Polyamine N-400" is described in D1 and D2 as a commercial product ("manufactured and sold"), nor by the reference in D2, Table I (columns 47, 48) to a few polyamine reactants as "a commercial mixture of ethylene polyamines"; neither of these facts amounts to the proof of a direct and unambiguous disclosure, as

required to establish a novelty destroying disclosure, of "Polyamine N-400" as being a mixture of polyamine compounds having an average "n=1" of repeating units according to the formula set out in these documents instead of being a pure compound having a single "repeating" unit.

3.7 By relying on the afore-mentioned purely speculative allegation of the disclosure in D1 and D2 of "Polyamine N-400" in the form of an empirical structural formula whose number of repeating units was indicated as an average only of a mixture of polyamines having different repeating unit numbers), the Respondent/Opponent did not properly discharge its burden of proof. This conclusion is not affected by the stated commercial unavailability of "Polyamine N-400" which prohibited experimental verification of its constitution.

3.8 The subject-matter of Claim 1 of the main request is, thus, in view of its construction arrived at by the Board (section 2 above) anticipated by the disclosures of D1 and D2. The main request is therefore not allowable.

First auxiliary request

4. *Article 123(2) EPC*

4.1 The amendment in Claim 1 of this request "said heavy polyamine is a mixture of polyalkylene amines" is derived from the passage on page 2, lines 6 to 9 of the patent specification (page 1, lines 10 to 14 of the original application) <"Heavy polyamine" as referred to

herein includes mixtures of higher oligomers of polyalkylene ... amines ...>.

4.2 By deleting from this passage the words "higher oligomers" its meaning is extended because the reference to such "oligomers" excludes the presence of "non-oligomers", i.e. polyalkylene polyamines having a high degree of polymerisation; the amended definition "said heavy polyamine is a mixture of polyalkylene amines" however comprises mixtures containing small quantities of such polyalkylene amines of high polymerisation degree in combination with large amounts of polyalkylene amines having a small number of repeating units (eg 3 or 4) which mixtures nevertheless may meet the requirements of Claim 1 that they have an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine.

4.3 The subject-matter of Claim 1 of the first auxiliary request thus contravenes the provisions of Article 123(2) EPC and this request is therefore not allowable.

Second auxiliary request

5. Article 84 EPC

5.1 Claim 1 of this request complies with the requirement of this article because the amended passage "... wherein said heavy polyamine is a mixture of higher oligomers of polyalkylene amines ..." and particularly the words "higher oligomers" therein is clear.

5.2 Notwithstanding that the words "higher" and "oligomers" do not by themselves have a precise significance, the meaning of the term "higher oligomers" is sufficiently elucidated by the ensuing characterisation: "and has an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine". Furthermore, the skilled person is aware from its common general knowledge that oligomers, as opposed to polymers, comprise relatively low numbers of repeating units (eg with a maximum around 10) and is therefore in no doubt about the practical significance of this term, especially if account is taken of the disclosure in the patent specification, particularly on page 3, lines 27 to 52.

5.3 The subject-matter of Claim 1 of the second auxiliary request therefore satisfies the requirements of Article 84 EPC.

6. *Article 123(2) EPC*

Claim 1 is also in agreement with the requirement of this article because there is no need for the inserted passage "... wherein said heavy polyamine is a mixture of higher oligomers of polyalkylene amines ..." to be supplemented by further features disclosed in combination therewith as allegedly essential features of the claimed invention.

6.1 All features in the statement on page 2, lines 4 to 9 of the patent specification (page 1, lines 10 to 14 of the original application):

<"Heavy polyamine" as referred to herein includes mixtures of higher oligomers of polyalkylene, e.g. polyethylene, amines containing, e.g., essentially no tetraethylene pentamine, small amounts of pentaethylenehexamine but primarily oligomers with 7 or more nitrogens, 2 or more primary amines per molecule and more branching than conventional polyamine mixtures>

which go beyond those introduced into Claim 1 of the second auxiliary request are optional. This results from the following considerations.

6.2 The optional character of the passage "e.g. polyethylene, amines containing, e.g., essentially no tetraethylene pentamine, small amounts of pentaethylenehexamine" is evident from the explicit exemplary character of these features; from the fact that this exemplification specifically relates to polyethylene polyamines it can be concluded that the exemplary disclosure extends up to but does not include the last part of the sentence beginning with "but primarily oligomers ...".

6.3 In view of the disclosure on page 3, lines 27 to 28 "The heavy polyamine ... contains more than seven nitrogens per molecule, but preferably polyamine oligomers ... and with 2 or more primary amines per molecule" (emphasis added) the reference in the statement cited in paragraph 6.1 above to "2 or more primary amines per molecule" must also be considered to relate to a preferred embodiment.

6.4 The same conclusion applies to the reference in said statement to "and more branching than conventional polyamine mixtures" because it results from the contents of the paragraph on page 3, lines 45 to 48 of the specification, and especially from the sentence "The balance is higher nitrogen content oligomers usually with a greater degree of branching" (emphasis added) that the presence of more than conventional branching is not an essential feature of the claimed invention.

7. *Article 123(3) EPC*

No objection was raised in this respect and also the Board is convinced that the subject-matter of Claim 1 of the second auxiliary request, which is more specific than that of its granted version, does not extend the scope of the granted patent.

8. *Novelty over D1 and D2*

While it is evident from the methods for the preparation of the polyamines referred to in D1 and D2 (cf. section VII(a)(i) above) that these documents *inter alia* envisage the use of polyamine mixtures, these documents are devoid of any disclosure attributing to these mixtures an average of at least 7 nitrogens per molecule and an equivalent weight of 120-160 grams per equivalent of primary amine as required by Claim 1 of the second auxiliary request.

The subject-matter of this claim is therefore novel over these two documents.

9. *Document D3*

9.1 Considering that

- this document had not been taken into account in the decision under appeal,

- its relevance for the appeal proceedings as well as that of the Opponent's respective submission of 30 August 2001 (containing experimental evidence) was mentioned by the Respondent for the first time in a submission dated 17 November 2003, i.e. only about one month prior to the oral proceedings,

- no written submissions by the Appellant with regard to the experimental evidence of the afore-mentioned submission of the Opponent were available at the oral proceedings,

- a decision concerning the relevance or possible novelty destroying character of D3 could not have been arrived at therefore without having given sufficient opportunity to the Appellant to reply and/or provide counterevidence,

- the Appellant requested that D3 should not be considered in the oral proceedings before the Board,

it was decided by the Board not to include a consideration of D3 at the oral proceedings.

9.2 In arriving at this conclusion the Respondent's concern that the case might be undesirably protracted by a remittal of the case to the first instance without D3 and the available experimental evidence having been considered during this appeal was duly taken into account. However, in the Board's view, this argument cannot prevail, in this case, over the procedural advantage of providing an opportunity for considering the relevance of D3 by two instances.

Gaining time by considering D3 only at the appeal stage is by no means sure, since this manner of continuing the case would presumably have required to enter into further written proceedings.

9.3 In this situation, in the application of its power under Article 111(1) EPC, the Board decides to remit the case to the first instance.

10. It appears that the first step to be taken by the Opposition Division after the remittal should be to invite the Appellant/Patentee to present its submissions having regard to the experimental evidence contained in the Opponent's submission dated 30 August 2001.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The main and the first auxiliary requests are refused.

3. The case is remitted to the Opposition Division for further prosecution on the basis of the second auxiliary request (claims Set A').

The Registrar: The Chairman:

E. Görgmaier R. Young