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**Datasheet for the decision  
of 17 December 2013**

**Case Number:** T 0816/10 - 3.3.10

**Application Number:** 99957297.7

**Publication Number:** 1133460

**IPC:** C07C7/20

**Language of the proceedings:** EN

**Title of invention:**

STABLISED COMPOSITIONS COMPRISING OLEFINS

**Patent Proprietor:**

Nalco Company

**Opponent:**

GE Betz, Inc.

**Headword:**

**Relevant legal provisions:**

EPC Art. 100(c), 123(2)  
RPBA Art. 12(2), 13(1), 13(3)

**Keyword:**

Amendments - added subject-matter (yes) - Main request,  
first and third to fifth auxiliary requests  
Late-filed auxiliary request - admitted (no)  
- Second auxiliary request

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
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Case Number: T 0816/10 - 3.3.10

**D E C I S I O N  
of Technical Board of Appeal 3.3.10  
of 17 December 2013**

**Appellant:**  
(Patent Proprietor)

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**Respondent:**  
(Opponent)

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**Representative:**

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 5 February 2010  
revoking European patent No. 1133460 pursuant to  
Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman:** P. Gryczka  
**Members:** R. Pérez Carlón  
D. Rogers

## Summary of Facts and Submissions

- I. The appeal lies from the decision of the opposition division to revoke European patent EP 1 133 460.
- II. An opposition was filed, on the grounds that the patent in suit contained added subject-matter (Article 100(c) EPC), that the invention was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC), and that subject-matter of the patent as granted was not novel and did not involve an inventive step (Article 100(a) EPC).
- III. The opposition division decided that replacing "comprising" by "consisting of" in claim 1 of the patent as granted did not generate added subject-matter, that the claimed invention was sufficiently disclosed for it to be carried out, and that the claimed subject-matter was novel, but did not involve an inventive step.
- IV. With the statement of grounds of appeal the appellant (patent proprietor) requested that the patent be maintained as granted (main request). Auxiliary requests 1 to 5 were filed during the oral proceedings before the board; auxiliary requests 3 to 5 are identical to auxiliary requests 1 to 3 filed earlier in the proceedings.
- V. The claims relevant for the present decision read as follows.

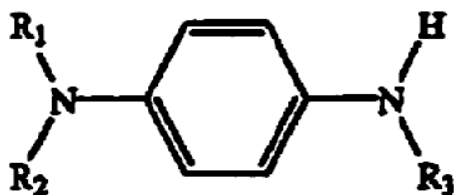
The **main request** contains two independent claims, claim 1 is directed to a composition and claim 7 to a method:

Claim 1: "A composition stabilized against premature polymerization consisting of

(a) a light olefin monomer selected from ethylene, propylene, butadiene and isoprene, and

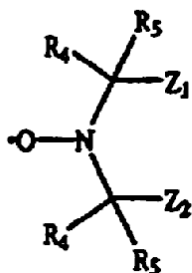
an effective polymerization inhibiting amount of a synergistic combination consisting of

(b) at least one phenylenediamine of the formula I



wherein  $R_1$ ,  $R_2$  and  $R_3$  are the same or different and are hydrogen, straight or branched chain alkyl of 1 to 20 carbon atoms, straight or branched chain alkyl of 1 to 20 carbon atoms which is substituted by one to three aryl groups, aryl of 6 to 12 carbon atoms, or aryl of 6 to 12 carbon atoms which is substituted by one to three alkyl groups of 1 to 6 carbon atoms; and

(c) at least one nitroxide of the formula II



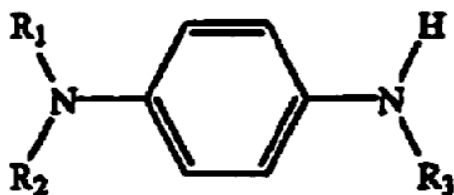
wherein  $R_4$  and  $R_5$  are independently alkyl of 1 to 4

carbon atoms or are together pentamethylene; and  $Z_1$  and  $Z_2$  are each methyl or  $Z_1$  and  $Z_2$  together form a linking moiety which may or may not contain heteroatoms or carbonyl groups and which additionally may be substituted by hydroxy, cyanohydrin, amino, alkoxy, amido, ketal, carboxy, hydrantoin, carbamate, or a urethane group."

Claim 7: "A method for inhibiting the premature polymerization or reactive light olefins said light olefins selected from ethylene, propylene, butadiene and isoprene consisting of

adding to said olefins an effective polymerization inhibiting amount of a synergistic combination consisting of

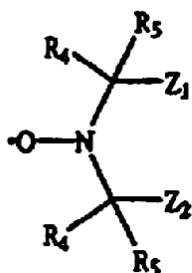
(a) at least one phenylenediamine of the formula I



wherein  $R_1$ ,  $R_2$  and  $R_3$  are the same or different and are hydrogen, straight or branched chain alkyl of 1 to 20 carbon atoms, straight or branched chain alkyl of 1 to 20 carbon atoms which is substituted by one to three aryl groups, aryl of 6 to 12 carbon atoms, or aryl of 6 to 12 carbon atoms which is substituted by one to three alkyl groups of 1 to 6 carbon atoms; and

(b) at least one nitroxide of the formula II

II



wherein  $R_4$  and  $R_5$  are independently alkyl of 1 to 4 carbon atoms or are together pentamethylene; and  $Z_1$  and  $Z_2$  are each methyl or  $Z_1$  and  $Z_2$  together form a linking moiety which may or may not contain heteroatoms or carbonyl groups and which additionally may be substituted by hydroxy, cyanohydrin, amino, alkoxy, amido, ketal, carboxy, hydrantoin, carbamate, or a urethane group."

Claim 1 of the **first auxiliary request** is identical to claim 7 of the main request. The first auxiliary request does not contain any claim directed to a composition.

Claim 1 of the **second auxiliary request** corresponds to claim 1 of the first auxiliary request in which the olefin is restricted to:

"light olefins selected from isoprene"

the relative amounts of components are further limited by the feature:

"in which the components b) and c) are added in the ratio of 1:10 to 10:1."

Claim 1 of the **third auxiliary request** differs from composition claim 1 of the main request only in that the olefin component (a) has been restricted to:

(a) *"a light olefin monomer selected from butadiene and isoprene"*

Claim 1 of the **fourth auxiliary request** differs from claim 1 of the third auxiliary request in that compounds (b) and (c) are more closely defined, and in the addition of the features:

*"in which the ratio of components b) to c) is in the range of 1:10 to 10:1"*

and

*"in which components b) and c) are each present in the range of from 0.1 parts per million to 10,000 parts per million of component a)."*

Finally, in claim 1 of the **fifth auxiliary request**, differs from claim 1 of the fourth auxiliary request in that the definition of component (c) is further restricted.

VI. The arguments of the appellant relevant for the present decision were the following:

By the replacement of the expression "comprising" by "consisting of", claim 1 of the main request and of the third to fifth auxiliary requests, it was excluded that the claimed compositions contains any components other than (a), (b) and (c) defined in claim 1. The amendment in claim 1 found a basis in the application as originally filed, which disclosed compositions



consisting only of components (a) to (c), whereby component (a) could be a pure olefin. A further basis for the compositions claimed could be found on page 10, lines 15-19, on page 11, lines 5-8 and in the examples of the application as originally filed. For these reasons, the compositions that are subject-matter of the main and the third to the fifth auxiliary requests did not represent added subject-matter.

Claim 1 of the first auxiliary request was based on claim 10 combined with the last line on page 1 or with the first line on page 3 of the application as originally filed. Furthermore, the term "synergistic combination" was merely "declaratory" in the sense that it just described that the combination of compounds (a) and (b) had a synergistic effect, but did not imply any restriction to the composition defined in claim 1, and for this reason it could not represent added subject-matter even in the absence of a basis thereof.

Claim 1 of the second auxiliary request merely restricted method claim 7 as granted to subject-matter which was already part of the granted claims and was thus not new material that would catch the other party or the board unawares. The second auxiliary request should, hence, be admitted into the proceedings.

VII. The respondent (opponent) argued that the application as originally filed only disclosed compositions in which (a) was an industrial feed. Since an industrial feed contained further components in addition to the olefin (a) as defined in claim 1, said compositions failed to provide a basis for the compositions of claim 1 consisting of (a), (b) and (c). For this reason, the main and third to fifth auxiliary requests contained added subject-matter.

Method claim 1 of the first auxiliary request required adding to a light olefin an effective polymerisation inhibiting amount of a synergistic combination of (a) and (b), and this feature did not find a basis in the application as filed, which only disclosed methods in which both (a) and (b) were present in effective amounts.

Finally, claim 1 of the second auxiliary request, filed for the first time during the oral proceedings before the board, was directed to subject-matter amounting to a restriction of the subject-matter of claim 7 as granted which generated a fresh case and caught the respondent unawares. Since it was not prepared to deal with that new subject-matter at the oral proceedings, the second auxiliary request should not be admitted.

VIII. Oral proceedings before the board took place on 17 December 2013.

IX. The final requests of the parties were the following:

- The appellant requested that the decision under appeal be set aside and, as a main request, that the patent be maintained as granted, or alternatively, that the patent be maintained upon the basis of any of auxiliary requests 1-5, submitted at the oral proceedings before the board on 17 December 2013.
- The respondent requested that the appeal be dismissed, and that auxiliary requests 1-5 be not admitted into the proceedings.

X. At the end of the oral proceedings, the decision was announced.

## Reasons for the Decision

1. The appeal is admissible.

Main request:

2. Amendments
  - 2.1 Claim 1 of the main request differs from claim 1 as originally filed in that the wording "comprising" has been replaced by "consisting of", so that claim 1 relates now to a composition stabilized against premature polymerisation **consisting of**
    - (a) a light olefin monomer, anda synergistic combination **consisting of**
    - (b) at least one phenylenediamine of formula I and
    - (c) at least one nitroxide of formula II.

Claim 1 of the main request excludes the presence of any further component due to the wording "consisting of". This interpretation has not been challenged by the appellant.

It needs to be examined whether the application as originally filed discloses, either explicitly or implicitly, compositions which contain a light olefin monomer (a) and a synergistic combination of phenylenediamine (b) and nitroxide (c), but do not contain any further component, implicit disclosure meaning no more than the clear and unambiguous consequence of what is explicitly disclosed.

- 2.2 The appellant argued that the compositions disclosed in the application as originally filed, namely in claim 1,

although open to the presence of further components by the wording "comprising", implicitly disclosed compositions consisting only of the components explicitly mentioned in the claim.

However, the application as originally filed discloses olefin component (a) **only** as a part of an industrial feed (page 3, lines 5 to 8 and page 1, lines 1 to 15), which necessarily contains further components. The skilled reader, in the light of the whole disclosure of the application as originally filed, concludes that the compositions according to the invention do not consist only of components (a), (b) and (c), but that additional components must always be present. The compositions of claim 1 are, thus, in contradiction to what is explicitly disclosed in the application as originally filed, with the consequence that they cannot be considered as implicitly disclosed.

- 2.3 The appellant argued that the application as originally filed disclosed on page 11, lines 5-8 that the compositions and methods of the invention "may also be used with other additives", which amounted to a disclosure that any such optional components could also be absent.

However, this passage refers to further additives known to prevent fouling and not to further components in general and, thus, fails to provide a basis for a composition consisting of (a), (b) and (c) as required by claim 1.

- 2.4 The appellant further argued that the examples of the application as originally filed disclosed compositions containing pure isoprene. Although said compositions further contained toluene, it was obvious for the

skilled person that toluene could be omitted and, thus, that pure olefins were contemplated within the claimed invention.

However, the disclosure of an application does not include what is rendered obvious to the skilled person. All the examples disclose compositions containing toluene which are not, thus, compositions according to claim 1, with the consequence that the examples also fail to provide a basis for the claimed compositions consisting of components (a), (b) and (c). This argument of the appellant is thus rejected.

- 2.5 The appellant further argued that page 10, lines 15-16 of the application as originally filed provided a basis for the claimed compositions. This passage mentioned that "the industrial plant streams are essentially the light olefins of this invention". Claim 1 resulted from replacing the term "industrial plant streams" in component (a) by its meaning "light olefins".

However, this passage only corroborates that the application as originally filed disclosed the stabilisation of industrial plant streams. Since said streams comprise further components which do not fall under the definition of any of (a) to (c) in claim 1, this passage cannot provide a basis for the compositions that form the subject-matter of claim 1.

- 2.6 For these reasons, claim 1 of the main request contains added subject-matter, with the consequence that the ground defined in Article 100(c) EPC precludes the maintenance of the patent as granted.

First auxiliary request:

3. Amendments:

3.1 Claim 1 of the first auxiliary request differs from claim 10 as originally filed in that the required effective inhibiting amount no longer refers to each of components (a) and (b), but to its "synergistic combination". Claim 1 of the first auxiliary request relates, thus, to a method for inhibiting the premature polymerisation of reactive light olefins consisting of adding to said olefins an effective polymerisation inhibiting amount *of a synergistic combination consisting of*

- (a) at least one phenylenediamine of the formula I
- and
- (b) at least one nitroxide of the formula II.

Claim 1 concerns *inter alia* a method consisting of adding an effective amount of the synergistic mixture of (a) and (b), but in which the amounts of (a) alone and/or of (b) alone are below the threshold of an effective polymerisation inhibiting amount, whereas the method of claim 10 as originally filed required an effective amount of (a) and an effective amount of (b).

3.2 The term "synergistic" can only be found in the last line of page 1 and the first line of page 3 of the description of the application as originally filed, where it does not refer to any amount of (a) and (b), as required by claim 1 of the first auxiliary request. These passages, thus, also fail to provide a basis for said claim.

3.3 The appellant has argued that the term "synergistic combination" was merely "declaratory" in the sense that it just described that (a) and (b) had a synergistic effect, but did not impart a limitation on the amounts

of the compounds (a) and (b). For this reason, a basis thereof in the application as originally filed was not necessary.

However, the term "synergistic combination" in claim 1 of the first auxiliary request implies that the required effective amount now refers to the combination of (a)+(b) and not to (a) and to (b) in isolation (see 3.1 above) and, hence, cannot be regarded as "declaratory" as alleged by the appellant, with the consequence that a basis thereof in the application as originally filed is required. This argument of the appellant is, thus, dismissed.

- 3.4 The board concludes, thus, that claim 1 of the first auxiliary request contains added subject-matter and this request is, therefore, not allowable.

Second auxiliary request:

4. Admissibility:

- 4.1 The second auxiliary request has been filed at a very late stage of the proceedings, namely at the oral proceedings before the board.

- 4.2 Claim 1 of the second auxiliary request is based on claim 7 as granted, whereby the compulsory olefin was restricted to isoprene and the relative amounts of the components (a) and (b) of the synergistic combination were restricted by the feature "in which the component b) and c) are added in the ratio of 1:10 to 10:1", which could be found in claim 14 as granted.

The appellant argued that this request aimed at addressing an eventual lack of novelty in the light of

an interpretation of the term "consisting of" which had only been put forward during the oral proceedings before the board. Claim 1 of the second auxiliary request was directed to subject-matter which was not technically complex and was already included in the claims as granted so that it should not represent a surprise to the board or the other party.

4.3 The respondent requested that the request be not admitted into the proceedings, since the claimed subject-matter arose from multiple restrictions of the subject-matter of claim 7 as granted for which it was not sufficiently prepared so as to be in a position to respond to them.

4.4 The purpose of the appeal proceedings in inter partes proceedings is mainly to give a party being adversely affected the possibility of challenging the decision of the first instance. According to Article 12(2) of the RPBA, the statement of grounds of appeal and the reply shall contain a party's complete case. If, at a later stage of the proceedings, the respondent wants other requests to be considered, admission of these requests into the proceedings is a matter of discretion for the board of appeal (Article 13(1) RPBA).

In the present case, the objection which may have prompted the filing of the second auxiliary request, namely lack of novelty, was raised in the statement of grounds of opposition, was part of the decision under appeal (see point 5.2 of the reasons) and was further pursued in the response to the grounds of appeal (see pages 27 and following). It is also clear from page 29 of said response that the novelty of the claimed subject-matter hinged on the interpretation of the term "consisting of". Therefore, the filing of this request



is not induced by objections, facts or evidence freshly raised.

Additionally, claim 1 of the second auxiliary request, although based on subject-matter already present in the claims as granted, defines nevertheless a combination of features which had not been put forward before. The appellant could not be expected to provide during the oral proceedings sufficient counter arguments to support its case without a detailed analysis of the art, and without the possibility of providing further evidence.

Thus, if this new request, filed at a very late stage, i.e. during the oral proceedings before the board, were to be admitted into the proceedings, the respondent could not be expected to deal with it so that the oral proceedings would have to be postponed which, according to Article 13(3) of the RPBA, should be avoided.

The second auxiliary request is thus not admitted into the proceedings (Article 13(3) RPBA).

Third to fifth auxiliary request, amendments:

5. Claim 1 of these requests is directed to a composition consisting of components (a), (b) and (c). As explained already with respect to the main request (see point 2.), the application as originally filed does not provide a basis for a composition consisting only of (a), (b) and (c) in the absence of any further component. Hence, these requests contain subject-matter which extends beyond the content of the application as originally filed for the same reasons as the main request and are thus not allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated