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**Datasheet for the decision
of 11 November 2021**

Case Number: T 2251/16 - 3.3.02

Application Number: 03770108.3

Publication Number: 1559772

IPC: C10M161/00, C10M133/00,
C10M143/00, C10M145/10,
C10M149/00, C10N20/04,
C10N30/06

Language of the proceedings: EN

Title of invention:
LUBRICATING OIL

Patent Proprietor:
Nippon Oil Corporation

Opponent:
Afton Chemical Corporation

Headword:

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Amendments

Decisions cited:

T 1621/16

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2251/16 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 11 November 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
5 August 2016 concerning maintenance of the
European Patent No. 1559772 in amended form.**

Composition of the Board:

Chairman M. O. Müller
Members: A. Lenzen
P. de Heij

Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent (appellant) against the opposition division's decision (decision under appeal), according to which European patent No. 1 559 772 (patent in suit) in amended form meets the requirements of the EPC.

II. In the opposition proceedings, the appellant requested that the patent in suit be revoked in its entirety based on the ground for opposition pursuant to Article 100(c) EPC, *inter alia*.

The decision under appeal is based on the main request, the set of claims of which was filed by letter dated 23 July 2014. The opposition division decided not to admit the two documents JP H1-271494 and ASTM D2714-94 into the proceedings and that the main request met the requirements of the EPC.

III. With its statement of grounds of appeal, the appellant re-filed the two documents which had not been admitted by the opposition division, i.e. JP H1-271494 (D19) and ASTM D2714-94 (D20).

IV. With its reply to the statement of grounds of appeal, the patent proprietor (respondent) filed sets of claims in first to eighth auxiliary requests and a page of the patent specification on which paragraph [0043] had been amended.

V. In preparation for the oral proceedings, which had been scheduled at the parties' requests, the board issued a communication pursuant to Article 15(1) RPBA 2020.

VI. With its letter dated 14 July 2020, the appellant filed:

D21 Experimental Report

VII. With its letter dated 21 October 2021, the respondent withdrew its request for oral proceedings and indicated that it would not attend the oral proceedings.

VIII. At the end of the oral proceedings, which were held by videoconference on 11 November 2021 without the respondent, the chair announced the order of this decision.

IX. The parties' final requests were as follows.

The appellant requested:

- that the decision under appeal be set aside and that the patent in suit be revoked in its entirety,
- that D19 and D20 be admitted into the proceedings, implying that the opposition division's decision not to admit these documents should be overturned, and
- that D21 be admitted into the proceedings.

The respondent requested in writing:

- that the appeal be dismissed (main request), implying that the patent in suit should be maintained in the amended form which was held allowable by the opposition division,
- as an alternative, that the patent in suit be maintained in amended form, based on the sets of claims of the first to eighth auxiliary requests,

filed with its reply to the statement of grounds of appeal,

- as a further alternative, that the patent in suit be maintained based on the sets of claims of any of the first to eighth auxiliary requests, with paragraph [0043] of the specification of the patent in suit being amended as indicated in its reply to the statement of grounds of appeal,
- that D19 and D20 not be admitted into the proceedings, implying that the opposition division's decision not to admit these documents should be maintained,
- that the appellant's argument, according to which the opposition division had incorrectly exercised its discretion as regards D19, not be admitted into the proceedings,
- that D21 and the conclusions drawn from it not be admitted into the proceedings, and
- that the appellant's objections under Article 123(2) EPC
 - to the wording "*and/or derivative thereof*" and
 - to the wording in claim 1 defining the amount of boron if a boron-modified nitrogen-containing compound is incorporatednot be admitted into the proceedings.

X. The appellant's appeal case, where relevant for the present decision, can be summarised as follows.

Six selections from the application as filed were necessary to arrive at claim 1 of the main request. These included (i) a first selection of the bis type succinimide of formula (2), (ii) a second selection of the poly(iso)butenyl group for the alk(en)yl groups R^2 and R^3 in said formula (2) and (iii) a third selection of the upper limit for the amount of the boron-modified

nitrogen-containing compound (B) (in terms of boron); however, there were no pointers to these selections. The bis type succinimide of formula (2) was not disclosed as being preferred. A preference for this compound could not be derived from the passage on page 9, fourth-to-last line to page 10, line 7. While selections (ii) and (iii) were disclosed as being preferred in the application as filed, the range for the number-average molecular weight of the alk(en)yl groups had been retained from claim 1 as filed; however, this range ("900 or more") was not at the same level of preference as selections (ii) and (iii). Furthermore, the application as filed related selection (iii) to solving the problem addressed by the application as filed (i.e. that of reducing wear). While the number-average molecular weight of the alk(en)yl groups in the boron-modified nitrogen-containing compound (B) was also related to solving this problem and was preferably "2000 or more", claim 1 of the main request had not been limited accordingly. Claim 1 of the main request, therefore, was a generalisation of a specific embodiment for which there was no basis in the application as filed. Lastly, even if it was accepted that formula (2) in the application as filed was preferred and that this preferred formula had been selected in claim 1, for index b present in this formula, the broadest range rather than preferred range had been selected in the claim. Hence, claim 1 of the main request did not meet the requirements of Article 123(2) EPC. The same reasoning applied to claim 1 of the first to eighth auxiliary requests.

XI. The respondent's appeal case, where relevant for the present decision, can be summarised as follows.

Each claim 1 of the main request and the first to eighth auxiliary requests fulfilled the requirements of Article 123(2) EPC (details of the respondent's arguments are contained in the reasons for the decision below).

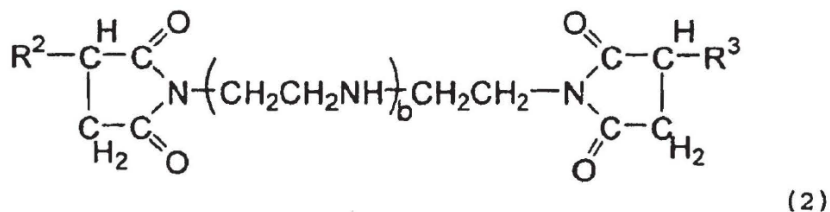
Reasons for the Decision

Main request

1. In comparison with claim 1 as filed, claim 1 of the main request has been amended as follows:

"A lubricating oil composition **obtainable by** ~~which is obtained by incorporating, into (A) a lubricant base oil comprising a mineral oil, a synthetic oil or a mixture thereof,~~

~~(B) a bis type succinimide of formula (2) a nitrogen-containing compound having at least one alkyl group or alkenyl group having a number-average molecular weight of 900 or more and/or a derivative thereof in an amount of 0.01 to 0.20% by mass in terms of the content of nitrogen of the total of the composition,~~



wherein R^2 and R^3 each independently represent a poly(iso)butenyl group having a number-average molecular weight of 900 or more, and b represents an integer of 0 to 4,

and

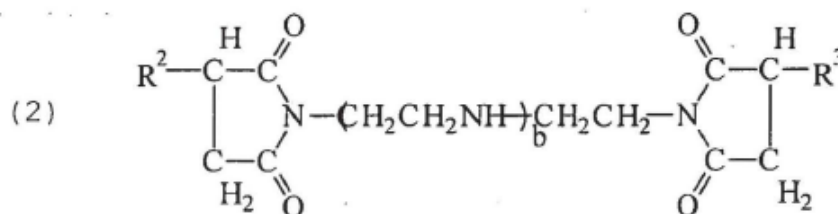
(C) a non-dispersion type polymethacrylate as a viscosity index improver having a weight average molecular weight of 10,000 to 40,000 ~~or less~~, so as to set the viscosity index of the composition to 160 or more and set the kinematic viscosity of the composition into the range of 20 to 30 mm²/s at 40°C,

wherein in the case that a boron-modified compound of the formula (2) is incorporated as component (B), the content thereof in terms of the amount of boron is 0.015% or less by mass on the basis of the total amount of the composition."

Therefore, in claim 1 of the main request, compound (B) is defined more narrowly and it is clarified that, if modified with boron, its amount must not exceed a certain upper limit (expressed in terms of boron; see the last paragraph of the above claim 1).

2. The application as filed sets out three general classes of nitrogen-containing compounds (B), namely (B-1) succinimides, (B-2) benzyl amines and (B-3) polyamines (page 8, line 17 to page 9, line 5). The application then goes on to set out specific examples for each class (page 9, line 6 to page 11, line 10). The two specific examples given for the succinimide class (B-1) are known as the mono type succinimide and the bis type succinimide. The latter is exemplified as follows (page 9, lines 6 to 15):

"More specific examples of the (B-1) succinimide include compounds represented by the following formula ... (2): ...



wherein R^2 and R^3 each independently represent an alkyl or alkenyl group having a number-average molecular weight of 900 or more, and b represents an integer of 0 to 4, preferably 1 to 3."

Disregarding the definition of the substituents R^2 and R^3 and of index b , this formula (2) corresponds to formula (2) as defined in claim 1. Against this background, a first selection (i) from the application as filed is necessary to arrive at claim 1 of the main request, namely the selection of the bis type succinimide of the above formula (2).

As regards index b of formula (2), the broadest definition of index b given on page 9 of the description for formula (2), namely that b represents an integer from 0 to 4, must be selected. This represents a second selection (ii).

As for the definition of the substituents R^2 and R^3 of formula (2), it should be noted that page 9 of the application as filed defines R^2 and R^3 broadly as "an alkyl or alkenyl group". In contrast, in formula (2) of claim 1, the two substituents R^2 and R^3 are defined specifically as "a poly(iso)butylene group". The alkyl/alkenyl groups (alk(en)yl groups) of compound (B) are described on page 6, lines 6 to 9, page 12, lines 6 to 24 and in claim 9 as preferably being a poly(iso)butylene group, as required by claim 1. The corresponding limitation of formula (2) in claim 1 of

the main request amounts to a third selection (iii) of these disclosures of the application as filed.

Lastly, the application as filed sets out that the nitrogen-containing compound (B) may be incorporated in the form of a boron-modified derivative. With regard to its amount (in terms of boron), the following is disclosed on page 15, lines 11 to 14:

"The upper limit of the content thereof in terms of the boron amount is preferably 0.05% or less by mass, more preferably 0.02% or less by mass, and particularly preferably 0.015% or less by mass."

The corresponding limitation in claim 1 of the main request to an amount of 0.015% or less amounts to a fourth selection (iv) from the application as filed.

3. Therefore, at least four selections (i)-(iv) from the application as filed are necessary to arrive at the combination of features in claim 1 of the main request. It is established case law of the boards of appeal that such a multiple selection results in subject-matter which extends beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC, unless there are pointers to the combination of features that is ultimately claimed.

The respondent essentially argued that the above selections were preferred according to the application as filed. They were disclosed in connection with the solution to the problem addressed by the application as filed (i.e. that of reducing wear). This coupled with the fact that the compositions in the examples of the application as filed all fell within the subject-matter of claim 1 of the main request were clear pointers to

the claimed combination of features. Consequently, it could not be concluded that the subject-matter of claim 1 extended beyond the content of the application as filed.

4. The board does not agree.

4.1 Regarding selection (i)

The passage relied on by the respondent for the alleged preference of the bis type succinimide of formula (2) (selection (i)) reads as follows (page 9, fourth-to-last line to page 10, line 7; emphasis added):

*"Succinimide is classified into the so-called mono type succinimide as represented by the formula (1), wherein succinic anhydride is added to one end of a polyamine at the time of imidation, and the so-called bis type succinimide as represented by the formula (2), wherein succinic anhydrides are added to both ends of a polyamide. As the (B-1) component, both thereof can be used. **Preferable is the bis type succinimide, that is, succinimide having two alkyl or alkenyl groups having a number-average molecular weight of 900 or more since the composition easily maintains an anti-wear characteristic at the initial use thereof and after the long-term use thereof.**"*

Although the beginning of this passage refers to the bis type succinimide of formula (2), the bis type succinimide which contributes to the reduction in wear and is therefore preferred is not defined with reference to formula (2), but as *"having two alkyl or alkenyl groups having a number-average molecular weight of 900 or more"*. Therefore, contrary to the

respondent's argument, a preference for the bis type succinimide of formula (2) cannot be directly and unambiguously derived from this passage. There is thus no pointer to the first selection (i).

4.2 Regarding selection (ii)

Page 9 of the application as filed discloses two ranges for index b of formula (2), namely a broad range of 0 to 4 and a preferred range of 1 to 3. The claimed range of 0 to 4 corresponds to the broad range in the application as filed. Hence, in order to arrive at selection (ii), the skilled person has to select the broadest embodiment rather than the preferred embodiment. Hence, the application as filed is also lacking a pointer to index b as defined in claim 1.

4.3 Regarding selection (iii)

A poly(iso)butenyl group as defined in claim 1 for R^2 and R^3 is disclosed as being a preferred embodiment on page 12, lines 6 to 24 of the application as filed; however, the very same paragraph also addresses the importance of the number-average molecular weight of these groups. While the broadest range disclosed in this respect is 900 or more, i.e. as required in claim 1 of the main request, the narrower ranges with higher lower limits of 1200/1700/2000/2300 are described as being increasingly preferred.

Further disclosure of a poly(iso)butenyl group can be found in the second full paragraph on page 6, lines 6 to 9 and claim 9 of the application as filed. These passages disclose a bis type succinimide having a poly(iso)butylene group with a lower limit for the molecular weight of 900, i.e. as required by claim 1;

however, this time, unlike in claim 1, this lower limit is combined with an upper limit of 2000.

Hence, in order to arrive at selection (iii), the skilled person has to select part of a preferred embodiment, namely the poly(iso)butylene group, and combine it with a non-preferred embodiment of the application as filed, namely a molecular weight range of 900 or more without any upper limit. Making the assumption that the application as filed provides a pointer to the combination of the preferred poly(iso)butenyl groups with the broadest possible range for the number-average molecular weight (900 or more), i.e. the combination in claim 1 of the main request, would amount to picking and mixing different preference levels within the application as filed.

4.4 Regarding selection (iv)

Page 15, lines 11 to 14 of application as filed discloses the upper limit for the amount of the boron-modified nitrogen-containing compound (B) (in terms of boron) as most preferably being "*0.015% or less by mass*". This corresponds to the range defined in claim 1 for the amount of the boron-modified nitrogen-containing compound (B). While it is true that the corresponding teaching relates to solving the problem addressed by the application as filed, as argued by the respondent, this also applies to other aspects of the compound at issue, i.e. the boron-modified nitrogen-containing compound (B). On page 13, lines 8 to 14, for instance, the number-average molecular weight of the alk(en)yl groups of this compound also relates to the very same problem and it is stated that a molecular weight of 2000 or more is preferred. The same follows from the second full paragraph on page 6, lines 9 to 11

and claim 9 of the application as filed, in which a boron-modified bis type succinimide having a poly(iso)butylene group is disclosed as being a preferred embodiment, but only with a lower limit for the molecular weight of as high as 2000. Similarly to the previous point, if anything, the teaching in the application as filed can only be considered as a pointer to the combination of the most preferred upper limit for the amount of the boron-modified nitrogen-containing compound (B) with the preferred range for the number-average molecular weight of its alk(en)yl groups (2000 or more). In contrast, making the assumption that the above teaching is a pointer to the combination of the preferred upper limit with the broadest possible range for the number-average molecular weight (900 or more), i.e. the combination in claim 1 of the main request, would amount to a combination of different preference levels.

4.5 Furthermore, while the compositions in the five examples of the application as filed contain different bis type polybutenyl succinimides, the examples provide no information whatsoever as to whether these compounds are in accordance with formula (2). It is therefore not possible to conclude from the application as filed whether or not the compositions in the examples are in accordance with claim 1 of the main request. The fact that precisely this cannot be established, and consequently that the examples cannot be regarded as pointers to the combination of the features of claim 1 of the main request, distinguishes this case from that of decision T 1621/16, on which the respondent relied (see points 1.7.3 and in particular 1.8.7 of the Reasons).

4.6 In summary, therefore, in order to arrive at the subject-matter of claim 1 of the main request, some non-preferred embodiments have to be selected from the application as filed (formula (2) and index b of this formula), these non-preferred embodiments then have to be combined with some preferred embodiments from the application as filed (the poly(iso)butylene group and the amount of boron) and lastly, when selecting these preferred embodiments, other preferred features (the molecular weight) disclosed in the application as filed in the context of the preferred embodiments have to be ignored. The need for such a pick-and-mix approach in order to arrive at the combination of features found in claim 1 of the main request implies that this combination is not directly and unambiguously disclosed in the application as filed. Consequently, the main request is not allowable.

First auxiliary request

5. Claim 1 of the first auxiliary request is identical to claim 1 of the main request. Therefore, the first auxiliary request is not allowable for the same reasons as those given above with regard to the main request.

Second to fourth auxiliary requests

6. Claim 1 of each of these auxiliary requests differs from claim 1 of the main request in that each of them additionally recites a lower limit for the amount of the boron-modified nitrogen-containing compound (B) (in terms of boron) ("*0.002% or more by mass*" in the second and third auxiliary requests; "*0.008% or more by mass*" in the fourth auxiliary request).

However, these amendments do not address the reasons why claim 1 of the main request is not considered allowable. Therefore, the second to fourth auxiliary requests are not allowable for the same reasons as those given above with regard to the main request.

Fifth and sixth auxiliary requests

7. Claim 1 of each of these auxiliary requests differs from claim 1 of the main request on account of the deletion of the term "and":

"(B) a bis type succinimide of formula (2) ~~and/or~~ a derivative thereof"

However, this amendment does not address the reasons why claim 1 of the main request is not considered allowable. Therefore, the fifth and sixth auxiliary requests are not allowable for the same reasons as those given above with regard to the main request.

Seventh and eighth auxiliary requests

8. Claim 1 of each of these auxiliary requests essentially incorporates two of the amendments mentioned above:

- Auxiliary request 7
 - *"(B) a bis type succinimide of formula (2) ~~and/or~~ a derivative thereof"*
 - *"0.002% or more by mass"*

- Auxiliary request 8
 - *"(B) a bis type succinimide of formula (2) ~~and/or~~ a derivative thereof"*
 - *"0.008% or more by mass"*

In view of the above, they are not allowable for the same reasons as those given with regard to the main request.

The respondent's further requests

9. As is clear from the reasoning above, none of D19 to D21 is relevant for the present decision.

Similarly, the appellant's objections under Article 123(2) EPC, namely

- the objection to the wording "*and/or derivative thereof*" in claim 1 and
- the objection to the wording in claim 1 defining the amount of boron if a boron-modified nitrogen-containing compound is incorporated, or, in other words, the objection that this compound is merely optional in the claims, whereas it is described as being essential in the application as filed,

are not relevant for the present decision.

Consequently, there was no need to decide on the respondent's requests relating to these documents and these objections at the oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent in suit is revoked.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated