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**Datasheet for the decision
of 5 July 2024**

Case Number: T 0211/23 - 3.3.03

Application Number: 16865267.5

Publication Number: 3399354

IPC: G02B1/04, C08F18/24

Language of the proceedings: EN

Title of invention:

ANTI-BLUE LIGHT OPTICAL RESIN LENS AND PREPARATION METHOD
THEREFOR

Patent Proprietor:

JIANGSU CONANT OPTICS CO., LTD

Opponent:

PPG Industries, Inc.

Relevant legal provisions:

EPC Art. 70(2), 123(2)

EPC R. 7

RPBA 2020 Art. 11, 12(2)

Keyword:

Extension beyond the content of the application as filed (no)
Remittal - special reasons (yes)

Decisions cited:

G 0002/10, G 0001/16, T 0312/94, T 1652/06, T 0293/12



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Case Number: T 0211/23 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 5 July 2024

Appellant: JIANGSU CONANT OPTICS CO., LTD
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Respondent: PPG Industries, Inc.
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Representative: f & e patent
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 December 2022
revoking European patent No. 3399354 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman D. Semino
Members: F. Rousseau
R. Cramer

Summary of Facts and Submissions

I. The appeal by the patent proprietor lies from the decision of the opposition division revoking European patent No. 3 399 354. The decision was based on a main request and auxiliary requests 1 to 5 filed with letter of 1 September 2022 and auxiliary requests 6 to 8 filed during oral proceedings before the opposition division on 2 November 2022.

II. The following documents were referred to among others before the opposition division:

E2: US 2019/0153131 A1

E4: CR-39, entry from Wikipedia.

III. Claim 1 as filed reads in its translated version as follows:

"1. A blue-light-proof optical resin lens, characterized by comprising resin monomers, a blue light absorber and a polymerization initiator; the mass ratio of the resin monomers to the blue light absorber to the polymerization initiator is 100:0.01-2.00:1.00-4.00; the resin monomers are the mixture of allyl diglycol carbonate (ADC) and polymers thereof; the blue light absorber is a benzophenone type ultraviolet light absorber and/or an indole type blue light absorber; the polymerization initiator is selected from one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane."

IV. According to the reasons for the contested decision which are pertinent to the appeal proceedings:

(a) The amendment

"- at least one of the one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tertamylperoxy-2-ethylhexyl carbonate and 1,1-di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane is tert-butyl peroxy-2-ethylhexyl carbonate or
- the blue light absorber is an indole type blue light absorber or a combination of a benzophenone type ultraviolet light absorber and an indole type blue light absorber"

contained in claim 1 of the main request resulted in the definition of overlapping possibilities, which definition merely excluded a small portion of what was defined in the application as filed. That amendment did not result in singling out a particular combination of specific features not disclosed in the application as filed.

Alternatively this amendment could be considered as an allowable combination resulting from a reduction of scope of two separate individual lists, one with three polymerisation initiator(s) out of a list of six in original claim 1 and alternatively one with two blue light absorber(s) remaining out of a list of three originally defined in claim 1 as filed. That amendment was therefore allowable.

(b) The amendment in claim 1 of the main request defining a refractive index range of 1.490-1.510 for the lens did not find a basis in the application as filed. The only part of the application as filed describing that range was

paragraph [0003], reference being made to the text of the application as filed in its published version EP A 3 399 354 A1. This part of the application as filed, however, concerned the description of the prior art. The rest of the application as filed did not mention a refractive index. The argument of the patent proprietor that this range of refractive indices was to be understood as implicitly referred to in the statement of the problems to be solved by the present invention in paragraph [0004] of the application as filed was not convincing.

For this reason, the main request whose claim 1 extended beyond the content of the application as filed was not allowable.

(c) Auxiliary requests 1 to 8 whose subject-matter was found to infringe the requirements of Article 123(2) EPC and/or Article 123(3) EPC were not allowable either.

- V. An appeal against that decision was lodged by the patent proprietor (appellant), who filed a statement of grounds of appeal. The opponent (respondent) filed a reply thereto.
- VI. In preparation of the oral proceedings, a communication pursuant to Article 15(1) RPBA conveying the Board's provisional opinion was issued.
- VII. Oral proceedings before the Board were held on 5 July 2024 by videoconference with the participation of both parties.
- VIII. The final requests of the parties were as follows:

- The appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of auxiliary requests 1 to 5, all filed with letter of 1 September 2022, or of auxiliary requests 6 to 8 filed during oral proceedings on 2 November 2022.

- The respondent requested that the appeal be dismissed.

IX. The sole claim relevant to the present decision is claim 1 of the main request which reads as follows:

"1. A blue-light-proof optical resin lens, characterized by comprising resin monomers, a blue light absorber and a polymerization initiator; wherein the resin monomers are a mixture of allyl diglycol carbonate (ADC) and polymers thereof; the blue light absorber is a benzophenone type ultraviolet light absorber and/or an indole type blue light absorber; the polymerization initiator is a polymerization initiator having an oxidizing property far lower than that of IPP and is selected from one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane, and wherein the mass ratio of the mixture of allyl diglycol carbonate (ADC) and polymers thereof to the benzophenone type ultraviolet light absorber and/or an indole type blue light absorber to the one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-

butylperoxy)-3,3,5-trimethylcyclohexane is 100:0.01-2.00:1.00-4.00,

wherein

- at least one of the one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane is tert-butyl peroxy-2-ethylhexyl carbonate or

- the blue light absorber is an indole type blue light absorber or a combination of a benzophenone type ultraviolet light absorber and an indole type blue light absorber,

the lens having a refractive index of 1.490-1.510."

- X. The parties' submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. The sole contentious point concerned the question whether the subject-matter of claim 1 of the main request extended beyond the content of the application as filed.

Reasons for the Decision

1. The appellant submitted that the opposition division chose to depart from the fundamental legal principle of Article 70(2) EPC without providing a substantiated reasoning. The appellant contested, for the purpose of assessing whether the subject-matter of the present claim requests extends beyond the content of the application as filed, the use of the translation in English, published as EP A 3 399 354 A1, instead of the original text in the Chinese language, filed as international application No. PCT/CN2016/072191.

This is not convincing. According to Rule 7 EPC, unless evidence is provided to the contrary (and no such evidence was submitted by the appellant), the European Patent Office shall assume, for the purpose of determining whether the European patent extends beyond the content of the application as filed, that the translation filed under Article 14, paragraph 2, or Rule 40, paragraph 3, is in conformity with the original text of the application. This principle applies *mutatis mutandis* in the case of a translation of an international application filed under the PCT in a non-EPC language.

In addition, the appellant's submissions in writing (statement of grounds of appeal, section 18) and during the oral proceedings were based on passages of EP A 3 399 354 A1. In the following, the passages of the application as filed referred to are therefore those of its translation published as EP A 3 399 354 A1.

2. The objection under Article 123(2) EPC raised by the respondent against claim 1 concerns the following two amendments:

- (i) "at least one of the one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-butyl peroxy)-3,3,5-trimethylcyclohexane is tert-butyl peroxy-2-ethylhexyl carbonate or
- the blue light absorber is an indole type blue light absorber or a combination of a benzophenone type ultraviolet light absorber and an indole type blue light absorber,"

- (ii) "the lens having a refractive index of 1.490-1.510".

3. In accordance with the established Case Law of the Boards of Appeal of the EPO, the relevant question to be decided in assessing whether the subject-matter of an amended claim extends beyond the content of the application as filed, is whether after the amendment the skilled person is presented with new technical information (see G 2/10, point 4.5.1 of the Reasons and Case Law of the Boards of Appeal of the EPO, 10th edition 2022, II.E.1.3.1). In other words, the above mentioned amendment is only allowable if the skilled person would derive the resulting claimed subject-matter directly and unambiguously, using common general knowledge, from the application as filed. This test referred to as the "gold standard" was confirmed in the context of disclosed disclaimers in decision G 1/16 (points 17 and 18 of the Reasons).

Allowability of amendment (i)

4. Amendment (i) consists of two parts, referred to in the following as (ia) and (ib). These amendments (ia) and (ib) at the end of operative claim 1 concern restrictions of the more general definition provided in the first part of that claim, for the blue light absorber and the polymerization initiator, respectively.
 - 4.1 With amendment (ia) the definition in claim 1 as filed that the polymerization initiator is selected from one or two of tert-butyl peroxy-2-ethylhexyl carbonate, tert-amyl peroxy-2-ethylhexyl carbonate and 1,1-di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane has been modified by requiring that at least one of the above is tert-butyl peroxy-2-ethylhexyl carbonate. It is undisputed that this amendment *per se* does not result

in an extension beyond the content of the application as filed, since it is implicit for the skilled reader that each of the above three mentioned polymerization initiators can be used.

Amendment (ia) concerning the polymerization initiator is to be read in conjunction with the unrestricted definition of the blue light absorber given in the first part of the claim. This reading results in a first group of possibilities as to the combination of polymerization initiator(s) and blue light absorber(s).

- 4.2 With amendment (ib) the definition in claim 1 as filed that the blue light absorber is a benzophenone type ultraviolet light absorber and/or an indole type blue light absorber has been restricted by excluding as alternative the sole use of the benzophenone type ultraviolet light absorber. It can be either the indole type blue light absorber or a combination of a benzophenone type ultraviolet light absorber and an indole type blue light absorber. It is undisputed that this amendment alone does not result in new technical information being created.

Amendment (ib) is to be read together with the unrestricted definition of the polymerization initiator in the first part of the claim. This reading results in a second group of possibilities as to the combination of polymerization initiator(s) and blue light absorber(s).

- 4.3 What is disputed by the respondent concerning these amendments (ia) and (ib) is that their combination results in an extension of the subject-matter beyond the content of the application as filed. It is argued in this respect that according to established case law,

the subject-matter that is the result of double selections is considered to be new matter and therefore infringes Article 123(2) EPC. Although it is acknowledged by the respondent that the two amendments (ia) and (ib) are connected by the operator "or" and accordingly represent alternatives, it is submitted by that party that the double selection criterion would be applicable to the present situation. Similar to the operator "and", the "or" would exclude certain combinations which are opposite to those which would be included by an "and", i.e. combinations of polymerization initiator and blue-light absorber which fulfil both conditions (rejoinder, page 3, third full paragraph).

- 4.3.1 This is in the Board's judgement not convincing. Amendments (ia) and (ib) undisputedly define two overlapping disclosed groups of possible combinations of blue light absorber(s) and polymerization initiator(s). These groups are acknowledged by the respondent to represent two alternatives, i.e. two alternative groups of combinations of blue light absorber(s) and polymerization initiator(s). Whereas the sole use of the conjunction "and" would have defined the overlapping area between these two groups, its absence in operative claim 1 is not to be interpreted as to mean that this area of overlap between these two groups is excluded. Nothing in operative claim 1 implies that this would be the case.

Claim 1 merely defines that the combination of blue light absorber(s) and polymerization initiator(s) to be used can belong to said first or second group, including the combinations of blue light absorber(s) and polymerization initiator(s) falling in the overlap zone between these two groups, as those combinations

can be found in the two groups. According to ordinary language, defining that the weather is either rainy or windy or that a dessert can be taken from those based on chocolate or those having fruits is not meant to exclude weather conditions with simultaneous rain and wind or desserts having both chocolate and fruits, respectively. Similarly, the language of claim 1 does not exclude combinations of polymerization initiator(s) and blue light absorber(s) which fall within both definitions.

4.3.2 On that basis, the argument concerning the need to make a double selection to arrive at the subject-matter of operative claim 1 which is based on a meaning of "or" excluding the zone of overlap between the two alternatives, which is not a proper interpretation of the meaning of operative claim 1, is not persuasive.

4.3.3 Accordingly, the definition of two alternative groups of combinations of blue light absorber(s) and polymerization initiator(s) resulting from amendments (ia) and (ib) does not amount to new technical information vis-à-vis the disclosure of the application as filed. Amendment (i) therefore complies with the requirements of Article 123(2) EPC.

Allowability of amendment (ii)

5. The question to be answered with respect to amendment (ii) is whether the application as filed describes, either explicitly or implicitly, that the invention for which protection is sought also concerns a lens with a refractive index of 1.490-1.510.

5.1 In this regard the appellant submits that the following expression in the first sentence of paragraph [0004]

introducing the summary of the invention "*Thus, in order to solve the above problems, the present invention provides*" should be read in the light of the immediately preceding sentence in paragraph [0003] "*Therefore, a blue-light-proof optical resin lens with a refractive index of 1.490-1.510 is rarely seen on the market, currently*", which paragraph [0003] concerns the description of the prior art. In other words, the problem to be solved should be understood to concern not only the provision of an optical resin lens which is "blue-light-proof", but which also has a refractive index of 1.490-1.510. Such a range of refractive index for the lens according to the invention would be therefore implicitly disclosed.

- 5.2 This is disputed by the respondent arguing that the pertinent case law, reference being made to decision T 1652/06 (Reasons 5.1 and 5.2), would make it clear that passages merely reflecting the background art are not related to the teaching of the invention. On that basis, what is disclosed in connection with the background art in the present application as filed could not be considered as part of the present invention (rejoinder, page 4, 4th paragraph).
- 5.3 The Board agrees with the respondent insofar as the description of the background art taken alone cannot be considered to describe the invention for which protection is sought. However, it cannot be held as a matter of principle that a passage of a patent application concerning the background art should always be ignored when assessing the technical disclosure of the patent application relating to the claimed invention. This would be contrary to the overriding principle in interpreting a document, in particular a patent application, that in order to determine its true

meaning and thus its content and disclosure, no part of such a document should be construed in isolation from the remainder of the document: on the contrary, each part of such a document has to be construed in the context of the contents of the document as a whole (Case Law, supra, I.C.4.1, reference being made in particular to T 312/94).

This is exemplified in decision T 0293/12 (Reasons, point 4, third paragraph, 6th sentence) in which it was found that *"This definition of the disease, although situated under the heading "State of the art", cannot be seen as relating merely to the discussion of diseases in the state of the art, but must be read as a clarification of the disease to be treated by the patent under consideration and therefore relates to the teaching of the present invention"*. It was also added in the same paragraph of decision T 0293/12 that decision T 1652/06 (i.e. the decision referred to in the present case by the respondent) was not pertinent for the case under consideration, *"since a case-by-case analysis of the structure and content of the description is necessary in order to come to a conclusion for a particular case"*.

Consequently, the question as to whether amendment (ii) is in keeping with the requirements of Article 123(2) EPC is to be answered taking into account the whole application as filed, including the part describing the related art, in particular its paragraph [0003].

- 5.4 It can be taken from claim 1 as filed that the blue-light-proof optical resin lens of the invention is obtainable by polymerizing a mixture of allyl diglycol carbonate (ADC) and polymers thereof with specific polymerization initiators and specific blue light

absorbers. The same information is also to be found in paragraph [0005] of the application as filed in the section summarizing the invention. At the end of this section in paragraph [0013] the reason for choosing the mixture of ADC and polymers thereof and this specific polymerization initiator is taught, namely because "*the use of the mixture of the allyl diglycol carbonate and the polymers thereof as the resin monomers reduces the chain opening activation energy, so a polymerization initiator with a relatively low oxidizing property can perform the initialization, has an oxidizing property far lower than that of IPP, and does not damage the blue light absorbing characteristic of the benzophenone type ultraviolet light absorber and the indole type blue light absorber*".

- 5.5 This passage of paragraph [0013] is to be read in the light of paragraph [0003] which concerns the so-called "conventional process of the 1.499 resin", its first sentence reading "*The conventional process of the 1.499 resin lens adopts allyl diglycol carbonate (ADC) and isopropyl peroxydicarbonate (IPP)*". It is in this context undisputed that this mention of a 1.499 resin lens implicitly refers to the polymerized product of pure ADC monomer with a refractive index of 1.498, reference being made to E4 (rejoinder, page 5, third bullet point), taking into account that accepted deviations of the refractive index are of +/-0.002, depending on the customer's standards (rejoinder, page 5, last bullet point).
- 5.6 In contrast to claim 1 as filed, this "conventional process" does not require the use of a polymer of ADC in admixture to ADC and the specific polymerization initiators described therein. This conventional process is indicated in paragraph [0003] to require an

initiator with a strong oxidizing property, i.e. IPP mentioned in its first sentence. This is indicated in the penultimate sentence of this paragraph to be problematic, since the common blue light absorbers are easily oxidized in the presence of IPP and lose for this reason their ability to absorb blue light.

In view of the adverb therefore with which the last sentence of paragraph [0003] begins, which sentence reads "*Therefore, a blue-light-proof optical resin lens with a refractive index of 1.490-1.510 is rarely seen on the market, currently*", the skilled person understands that the cause for rarely seeing a blue-light-proof optical resin lens with a refractive index of 1.490-1.510 is the conventional process in which ADC is polymerized in the presence of IPP. This is the conclusion in the part of the application as filed concerning the background art.

- 5.7 The next sentence which follows that conclusion is part of the description concerning the summary of the invention. It reads "*Thus, in order to solve the above problems, the present invention provides a blue-light-proof optical resin lens and also provides a preparation method for the blue-light-proof optical resin lens*".

Having regard to the concluding sentence in the paragraph presenting the prior art which ends with the adverb "currently" and the introductory sentence concerning the invention starting with the adverb "Thus" being adjacent, it is immediately clear that the sentence introducing the summary of the invention is to be read in conjunction with said conclusion. This implies that the present invention allows the skilled person to prepare a blue-light-proof optical resin lens

with a refractive index of 1.490-1.510 which "is rarely seen on the market, currently".

5.8 Moreover, the mention of a refractive index of 1.499 for the conventional process and of a refractive index range of 1.490-1.510 in paragraph [0003] must be assumed to serve a purpose. If the sole problem to be solved were the provision of a blue-light-proof optical resin lens which merely involves the polymerization of ADC, there would be no need to specify in addition a range for its refractive index, let alone to mention the refractive index obtained using the conventional process. Accordingly, a reading of that last sentence of paragraph [0003] which ignores this information is, in the Board's opinion, artificial.

5.9 The technique adopted to prepare a blue-light-proof optical resin lens is described in the next paragraph (paragraph [0005]) which comprises the use of a mixture of the ADC and the polymers thereof. This is also shown with the examples of the application as filed in which, as noted by the respondent, lenses based on copolymers of ADC are prepared (rejoinder, page 5, second bullet point). Reference was made to the product under the tradename RAV 7NG for which information can be found in E2 and to the PPG product LS which are used in embodiments 1 to 5 of the application as filed.

5.10 In this context, it is common general knowledge that the refractive index of a polymer depends among other factors on its constituents. The respondent submitted in this respect that the lens materials prepared in the examples of the patent in suit contain blue-light absorbers which are known to alter the refractive index (rejoinder, page 5, second bullet point, last sentence). Hence, against the background of this common

general knowledge, the skilled person would find confirmation that the range of refractive indices defined in the last sentence of paragraph [0003] which is centred on the value of 1.499 is not only what is sought to be obtained, but the result of the modifications operated vis-à-vis the conventional process of the 1.499 resin lens.

5.11 In view of the above considerations, it is concluded that the definition of a blue-light-proof optical resin lens having a refractive index of 1.490-1.510 in operative claim 1 does not result in new technical information being generated vis-à-vis the application as filed. Amendment (ii) is therefore also in keeping with the requirements of Article 123(2) EPC.

6. Consequently, the opposition's division finding that the main request is not allowable, as the subject-matter of its claim 1 would extend beyond the content of the application as filed, is not justified.

Remittal

7. Article 11 RPBA provides that the Board shall not remit a case to the department whose decision was appealed for further prosecution, unless special reasons present themselves for doing so. Whether "special reasons" present themselves is to be decided on a case-by-case basis (Case Law, supra, V.A.9.2.1). This provision has also to be read in conjunction with Article 12(2) RPBA, which provides that it is the primary object of the appeal proceedings to review the decision under appeal in a judicial manner.

The opposition division decided solely on the issue of added matter, whereas sufficiency of disclosure and

inventive step of the subject-matter of the main request are still objected to by the respondent (rejoinder, page 12 ff). Those objections were not discussed at the oral proceedings and no decision was taken in this respect.

The appellant requested in writing that the case not be remitted to the opposition division for consideration of the grounds of opposition under Articles 100(a) and 100(b) EPC, since those grounds of opposition would immediately appear to be unfounded, reference being made to their letter of 1 September 2022. This request was withdrawn during the oral proceedings. In fact, both parties agreed to a remittal for further prosecution.

This situation is seen by the Board to constitute "special reasons" within the meaning of Article 11 RPBA which justify remittal of the case for further prosecution to the department whose decision was appealed.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



D. Hampe

D. Semino

Decision electronically authenticated