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**Datasheet for the decision  
of 8 December 2022**

**Case Number:** T 1556/20 - 3.3.06

**Application Number:** 14187149.1

**Publication Number:** 2857460

**IPC:** C09C1/40, C09C1/00, C09C1/02,  
C09C1/36

**Language of the proceedings:** EN

**Title of invention:**  
Composite pigments

**Patent Proprietor:**  
THIELE KAOLIN COMPANY

**Opponent:**  
Omya International AG

**Headword:**  
Increased brightness pigment/THIELE KAOLIN

**Relevant legal provisions:**  
EPC Art. 100(c), 123(2)  
RPBA 2020 Art. 12(4), 12(6)

**Keyword:**

Amendments - extension beyond the content of the application as filed (yes) - combination of features taken from different examples

Admissibility of auxiliary requests 1 to 5 (no) - requests already not admitted by the opposition division

Admissibility of auxiliary requests 6 to 9 (no) - filing of additional auxiliary requests in appeal not justified

Infringement of the right to be heard (no) - Refusal of the opposition division to postpone oral proceedings since the proprietor's technical expert could not attend

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1556/20 - 3.3.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.06**  
**of 8 December 2022**

**Appellant:** THIELE KAOLIN COMPANY  
(Patent Proprietor) P.O. Box 1056  
Sandersville, GA 31082 (US)

**Representative:** HGF  
HGF Limited  
1 City Walk  
Leeds LS11 9DX (GB)

**Respondent:** Omya International AG  
(Opponent) Baslerstrasse 42  
4665 Oftringen (CH)

**Representative:** Maiwald GmbH  
Elisenhof  
Elisenstraße 3  
80335 München (DE)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 29 April 2020  
revoking European patent No. 2857460 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** J.-M. Schwaller  
**Members:** L. Li Voti  
R. Cramer

## Summary of Facts and Submissions

I. The patent proprietor's appeal is against the decision of the opposition division to revoke European patent no. 2 857 460, claim 1 thereof reading as follows:

*"1. A process for the manufacture of a high brightness composite pigment which comprises a mineral pigment and calcium carbonate, wherein the process comprises the steps of:*

- (a) obtaining a slurry of particles of the mineral pigment;*
- (b) adding slaked lime to the slurry to form a mixture; wherein the amount of slaked lime added to the mineral pigment slurry is from about 1.8% to about 6.3% based on the weight of the dry mineral pigment;*
- (c) passing carbon dioxide gas through the mixture to precipitate calcium carbonate on surfaces of the mineral pigment particles;*
- (d) stopping passage of the carbon dioxide gas when the mixture has a pH of about 7.0; and*
- (e) repeating steps (b)-(d) a plurality of times to produce the composite pigment, wherein the amount of slaked lime added to the mineral pigment slurry in step (b) for each carbonation cycle is from about 1.8% to about 6.3% based on the weight of the dry mineral pigment;*

*wherein the GE brightness of the composite pigment is increased by at least 1.1 unit compared to the starting material; and wherein the composite pigment has a substantially reduced amount of particles of less than 0.2 microns compared to the starting mineral pigment and the same or slightly increased amount of particles of 1-2 microns compared to the starting*

*mineral pigment thus making the overall particle size distribution narrower."*

- II. With its statement of grounds of appeal the appellant defended the patent as granted (main request) and filed auxiliary requests 1 to 9.

Claim 1 of **auxiliary request 6** reads as follows (amendments with respect to the main request put in evidence by the board):

*"1. A process for the manufacture of a high brightness composite pigment which comprises a mineral pigment and calcium carbonate, wherein the process comprises the steps of:*

- (a) obtaining a slurry of particles of the mineral pigment;*
  - (b) adding slaked lime to the slurry to form a mixture; wherein the amount of slaked lime added to the mineral pigment slurry is from ~~about~~ 1.8% to ~~about 6.3%~~ 2.9% based on the weight of the dry mineral pigment;*
  - (c) passing carbon dioxide gas through the mixture to precipitate calcium carbonate on surfaces of the mineral pigment particles;*
  - (d) stopping passage of the carbon dioxide gas when the mixture has a pH of about 7.0; and*
  - (e) repeating steps (b)-(d) a plurality of times to produce the composite pigment, wherein the amount of slaked lime added to the mineral pigment slurry in step*
    - (b) for each carbonation cycle is from ~~about~~ 1.8% to ~~about 6.3%~~ 2.9% based on the weight of the dry mineral pigment and wherein the number of carbonation cycles is from 11 to 18, and wherein the flow rate of CO<sub>2</sub> gas is 65 L/min.Kg Ca(OH)<sub>2</sub>;*
- wherein the GE brightness of the composite pigment*

*is increased by ~~at least 1.1~~ 1.4 to 1.6 units compared to the starting material; and wherein the composite pigment has a substantially reduced amount of particles of less than 0.2 microns compared to the starting mineral pigment and the same or slightly increased amount of particles of 1-2 microns compared to the starting mineral pigment, ~~thus making the overall particle size distribution narrower.~~"*

Claim 1 of **auxiliary request 7** differs from that of auxiliary request 6 in that:

- the mineral pigment is a fine particle size delaminated kaolin clay,
- the amount of slaked lime added to the mineral pigment slurry in step (b) for each carbonation cycle is 2.1%,
- the number of carbonation cycles is 15,
- the GE brightness of the composite pigment is increased by 1.5 units and in that
- it includes the final wording "thus making the overall particle size distribution narrower."

Claim 1 of **auxiliary request 8** differs from that of auxiliary request 7 in that

- the amount of slaked lime added to the mineral pigment slurry in step (b) for each carbonation cycle is about 1.8% to 2.4% (step (b) however reciting an addition of 2.4% only),
- the number of carbonation cycles is from 13 to 18, and
- the GE brightness of the composite pigment is increased by 1.4 to 1.6 units.

Claim 1 of **auxiliary request 9** differs from of auxiliary request 7 in that

- the amount of slaked lime added to the mineral pigment slurry in step (b) for each carbonation cycle is 1.8%, 2.1% or 2.4%,
- the number of carbonation cycles is 13, 15 or 18, respectively, and
- the GE brightness of the composite pigment is increased by 1.4, 1.5 and 1.6, respectively.

III. The opponent (also respondent) replied that claim 1 as granted infringed Article 123(2) EPC and that the auxiliary requests were not to be admitted into the proceedings.

IV. Following the board's preliminary opinion that claim 1 of the main request did not comply with the requirements of Article 123(2) EPC and that the auxiliary requests appeared not to be admissible, no further arguments were submitted by the parties.

V. The parties' final requests at the oral proceedings held on 8 December 2022 were as follows:

The appellant requested as a main request that the decision under appeal be set aside and the patent be maintained as granted, or alternatively that the patent be maintained in amended form on the basis of one of auxiliary requests 1 to 9 filed with the statement of grounds of appeal.

The respondent requested that the appeal be dismissed, and that auxiliary requests 1 to 9 not be admitted into the proceedings.

## Reasons for the Decision

1. *Compliance of the patent as granted with the requirements of Article 123(2) EPC (Article 100(c) EPC)*
- 1.1 Claim 1 as granted relates to a process for the manufacture of a high brightness composite pigment which comprises a mineral pigment and calcium carbonate, and requires inter alia that the GE brightness of the composite pigment is increased by at least 1.1 unit compared to the starting material and that the process comprises a plurality of carbonation cycles including the step of adding slaked lime to a slurry of particles of the mineral pigment to form a mixture, wherein the amount of slaked lime added is from about 1.8% to about 6.3% based on the weight of the dry mineral pigment.
- 1.2 According to the appellant, the claimed GE brightness increase is supported by the lowest increase disclosed in the examples as filed, namely example 4 (table 7, pigment 12), whilst the claimed range of added slaked lime combines the lowest and the highest amount of slaked lime added in the examples, with the lowest being the one disclosed in example 3 (table 5, pigment 9) and the highest in example 4 (table 7, pigment 10).
- 1.2.1 Even though the support for these features is based on a combination of different examples, the appellant argued that the skilled person, taking the whole disclosure into account, would have understood that the operative conditions of claim 1 were generically applicable to the process of the invention and led to a composite pigment having at least a GE brightness increase as claimed.



1.3 The board notes that indeed the application as filed (page 1, lines 1-11; page 8, lines 13-14) discloses that the invention provides composite pigments with improved brightness, it however does not disclose that the claimed process provides a defined improvement of GE brightness with respect to the pigment of departure, nor does it support an undefined improvement as encompassed by the open range of claim 1 at issue (the highest GE brightness increase illustrated by the examples - example 2, table 3, pigments 4 and 5 - is 2.3 units). Moreover, the amount of added slaked lime disclosed in the description (page 11, lines 7-9) is of about 2.0 to 3.0% based on the weight of dry kaolin clay, i.e. a range different from that in claim 1 at issue and which is furthermore related to a specific pigment, whilst claim 1 at issue relates instead to a generic unspecified pigment.

1.3.1 Therefore, and even though this part of the description would be held as suggesting to the skilled person to operate within the limits of claim 1 at issue, it does not contain any direct and unambiguous disclosure of a combination of the features (GE brightness increase and added slaked lime) claimed.

1.3.2 Moreover, it is directly apparent from the examples that by varying the amount of slaked lime added to each carbonation cycle, on the one hand, and the number of carbonation cycles, on the other hand, the GE brightness increase varies even though the amount of calcium carbonate in the final pigment is the same, which disclosure is in line with the teaching of the description (page 11, lines 3-4 and lines 10-12) that the number of carbonation cycles depends on the amount of calcium carbonate desired in the resulting composite pigment (both being not limited in claim 1 at issue)

and that the appropriate amount of calcium carbonate addition (formed from slaked lime) for each carbonation cycle is narrow and critical.

Therefore, neither the amount of added slaked lime nor the GE brightness increase are independent from the process conditions used but are necessarily linked to the number of carbonation cycles and the desired amount of calcium carbonate to be deposited onto the pigment of departure (in the case of the above cited tables 5 and 7, this amounts to 30% by weight).

- 1.4 It is also directly apparent from the discussion of the prior art in the description (page 2, line 11 to page 6, line 12) that it was known that different pigments provide different properties. Therefore, even by applying the same process conditions, the same GE brightness increase cannot be expected for any possible pigment so that the improvements shown in the illustrative examples cannot be considered to be independent from the pigment used.

Therefore, the combination of features taken from different examples necessarily generates subject-matter not disclosed in the application as filed.

- 1.5 The board further notes that according to claim 1 at issue the addition of slaked lime, for example at an amount of 1.8%, may be carried out for a different number of carbonation cycles than that disclosed in the corresponding example (Table 5, pigment 9), thus leading to a composite pigment with an amount of calcium carbonate necessarily different from that of the example. Hence claim 1 at issue also includes processes with a combination of features not disclosed in any of the examples of the application as filed.

1.6 For all these reasons, the board concludes that the combination of features of claim 1 at issue is not directly and unambiguously derivable from the application as filed and corresponds to an intermediate generalisation for which there is no basis in the application as filed.

1.7 Claim 1 as granted thus infringes Article 123(2) EPC, so that the ground for opposition under Article 100(c) EPC prejudices the maintenance of the patent as granted.

2. *Auxiliary requests 1 to 5 - Admittance*

2.1 The board notes that these requests are identical to those late filed during the oral proceedings before the opposition division and not admitted as they did not prima facie fulfil the requirements of Article 123(2) EPC (see points 3 and 4 of the decision under appeal).

2.2 According to Article 12(6) RPBA 2020, the board shall not admit requests which were not admitted in the proceedings leading to the decision under appeal, unless the decision not to admit them suffers from an error in the use of discretion or the circumstances of the appeal case justify their admittance.

2.3 In the present case, the board cannot recognise any error by the opposition division in the use of its discretion not to admit these late-filed requests as the latter appear not to be prima facie allowable under Article 123(2) EPC for the reasons given in the decision under appeal, which in the board's view is correct. Moreover, the circumstances of the appeal case are not different from those existing before the

opposition division since the disputed issues remain the same.

2.4 Therefore the board has decided not to admit these requests into the proceedings under Article 12(6) RPBA 2020.

3. *Auxiliary requests 6 to 9 - Admittance*

3.1 The requests having been filed for the first time with the grounds of appeal, under the provisions of Article 12(4) RPBA 2020 such requests may be admitted at the board's discretion, which has to be exercised in view of inter alia the suitability of the amendment to address the issues which led to the decision under appeal and the need for procedural economy. Moreover, the board shall not admit such requests which should have been submitted in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance (Article 12(6) RPBA 2020).

3.2 In the present case it appears that it would have been appropriate to file these requests already during the first instance proceedings, since the proprietor filed six auxiliary requests in reply to the notice of opposition and the negative preliminary opinion of the opposition division regarding compliance with the requirements of Article 123(2) EPC. Further, it was allowed to file seven additional amended auxiliary requests (new auxiliary requests 1 to 6 and a further amended auxiliary request 6) during oral proceedings, but when asked by the chairperson at the oral proceedings whether it intended to submit further amendments (page 4, second and third full paragraphs of

the minutes), it decided not to file any further request.

- 3.2.1 In the board's view, neither the filing of auxiliary request 6, which differs from that auxiliary request 6 filed before the opposition division only in that in claim 1 the GE brightness of the composite pigment is increased by 1.4 to 1.6 units (instead of by 1.5 to 1.6 units), nor the filing of auxiliary requests 7 to 9, which now specify in their respective claim 1 a different closed range of GE brightness increase or a specific increase thereof and the pigment of departure, can be considered a response to arguments that the patent proprietor became aware only after reading the decision under appeal.

In fact, it is directly apparent from the minutes of the oral proceedings (page 3, last three full paragraphs) that, after discussing patentability of the then pending amended auxiliary request 6, the proprietor mentioned that it might be willing to include features concerning the nature of the pigment and the amount of calcium carbonate into the claim of this request. But after the announcement by the chairperson that the then pending amended auxiliary request 6 was not admissible (because not prima facie overcoming the Article 123(2) EPC objections and still including a generalisation combining specific conditions taken from a table with a generic mineral pigment), the proprietor decided not to submit further requests.

- 3.3 It follows that since the proprietor was aware of all the deficiencies that led to the revocation of the patent, there is no justification for the filing of these additional requests in appeal. Moreover, as

already indicated in the board's preliminary opinion to which the appellant did not reply in writing, also these requests are prima facie not apt to overcome the objections raised, and for some of them they raise even new issues.

3.4 The appellant additionally argued during oral proceedings that its technical expert could not attend the oral proceedings at the scheduled date, but the opposition division refused to postpone it, despite the presence of opponent's technical expert. This refusal by the opposition division rendered impossible a contradictory discussion by the technical experts about the technical meaning of some terms of the patent, and constituted an infringement of the proprietor's right to be heard. This fact justified in its view the filing of additional auxiliary requests in appeal.

3.4.1 The board notes that the proprietor requested to be accompanied at the oral proceedings by its technical expert, who was expected to travel on 4 March 2020 from the United States to the Netherlands (see letter of 28 February 2020, last paragraph). In view of the worsening of the pandemic and the uncertainty about possible travel restrictions, impeding possibly a return back home of the technical expert, the proprietor requested with letter of 28 February 2020 - i.e. shortly before the oral proceedings scheduled for 6 March 2020 - that these be postponed. The request for postponement was however rejected by the opposition division and oral proceedings took place as scheduled in the absence of the patentee's technical expert.

3.4.2 The board notes that the proprietor only announced by letter dated 10 February 2020, i.e. less than one month before the oral proceedings, that it intended to be

accompanied at the oral proceedings by a technical expert. Moreover, it requested that the technical expert be allowed to provide statements and counter statements as regards the subject-matter of the patent and in particular in relation to the subject-matter on which the technical expert of the opponent would present.

As noted by the respondent, the technical expert of the opponent did not present anything during the oral proceedings since the discussion was limited to the compliance with the requirements of Article 123(2) EPC.

Under these circumstances it is the board's view that the proprietor had no disadvantage due to the absence of its technical expert at the oral proceedings. This is even more evident, since neither the appellant nor the respondent were accompanied by a technical expert at the oral proceedings before the board, wherein the same issues as before the opposition division were to be discussed.

Indeed, the issue regarding compliance with Article 123(2) EPC did not require any particular technical expertise and could be discussed by both parties, also at the oral proceedings before the board and in the absence of any technical expert.

3.4.3 Therefore, as already indicated in the board's preliminary opinion, the proprietor's right to be heard has not been violated by the refusal of the opposition division to postpone the oral proceedings scheduled for 6 March 2020.

Furthermore, it is irrelevant for the present case whether or not a discussion between the technical

experts could have taken place. Therefore, also the above argument does not justify the filing of additional auxiliary requests in appeal.

3.5 The board has thus decided not to admit auxiliary requests 6 to 9 into the proceedings under Articles 12(4) and (6) RPBA 2020.

## Order

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

The appeal is dismissed.

The Registrar:

The Chairman:



A. Pinna

J.-M. Schwaller

Decision electronically authenticated