

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 16 November 2022**

Case Number: T 1738/19 - 3.3.03

Application Number: 11838677.0

Publication Number: 2635634

IPC: C08L61/00, C08G2/00, C08K7/02,
C08L1/02, B05C3/02

Language of the proceedings: EN

Title of invention:

METHOD OF USING ALDEHYDE-FUNCTIONALIZED POLYMERS TO INCREASE
PAPER MACHINE PERFORMANCE AND ENHANCE SIZING

Patent Proprietor:

Nalco Company

Opponent:

BASF SE

Relevant legal provisions:

EPC Art. 56
RPBA Art. 12(2), 12(4)
RPBA 2020 Art. 13(2)

Keyword:

Inventive step - (main request: no)

Auxiliary request - submitted with the rejoinder to the statement of grounds of appeal - not substantiated - taken into account (no)

Amendment after summons - taken into account (no)

Decisions cited:

T 0939/92, T 0687/15



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 1738/19 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 16 November 2022

Appellant: BASF SE
(Opponent) 67058 Ludwigshafen (DE)

Representative: LKGlobal UK Ltd.
Cambridge House
Henry Street
Bath BA1 1BT (GB)

Respondent: Nalco Company
(Patent Proprietor) 1601 West Diehl Road
Naperville, IL 60563-1198 (US)

Representative: Godemeyer Blum Lenze Patentanwälte
Partnerschaft mbB - werkpatent
An den Gärten 7
51491 Overath (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
15 April 2019 concerning maintenance of the
European Patent No. 2635634 in amended form.**

Composition of the Board:

Chairman D. Semino
Members: O. Dury
A. Bacchin

Summary of Facts and Submissions

I. The appeal of the opponent is against the interlocutory decision of the opposition division concerning maintenance of European Patent No. 2 635 634 in amended form on the basis of the claims of the first auxiliary request filed with letter of 25 January 2019.

II. The following documents were *inter alia* cited in the decision under appeal:

D1: WO 00/15906

D2: WO 2008/141093 A1

D3: EP 0 151 994 A2

III. In that decision, the following conclusions relevant to the present decision were reached by the opposition division:

- The first auxiliary request met the requirements of Rule 80 EPC, Article 123(2) (3) EPC and Article 84 EPC.
- Considering that no objection of lack of novelty was raised by the opponent against the first auxiliary request and that also the opposition division had no concerns in that respect, novelty of the first auxiliary request was acknowledged.
- The subject-matter of the first auxiliary request was inventive when taking example 4 of D2 as the closest prior art, even in the light of the teaching of D1 and D3.

For these reasons, the patent as amended according to the first auxiliary request was held to meet the requirements of the EPC.

- IV. The opponent (appellant) lodged an appeal against that decision.
- V. With their rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) filed a set of claims as first auxiliary request.
- VI. The parties were summoned to oral proceedings and a communication indicating specific issues to be discussed at the oral proceedings was then sent to the parties.
- VII. With letter of 29 September 2022 the appellant withdrew the request for the reimbursement of the appeal fee made in their statement of grounds of appeal.
- VIII. Oral proceedings were held on 16 November 2022 in the presence of both parties (via videoconference).
- IX. **The final requests of the parties were as follows:**
 - (a) The appellant requested that the decision under appeal be set aside and that the European patent be revoked.
 - (b) The respondent requested that the appeal be dismissed (main request) or, in the alternative, that the patent be maintained in amended form on the basis of the first auxiliary request filed with the rejoinder to the statement of grounds of appeal.

X. Claim 1 of the **main request** read as follows:

"1. A composition comprising a sizing mixture having a stabilizing amount of one or more aldehyde-functionalized polymers having at least one aldehyde-reactive monomer species present in any amount and in any combination in said aldehyde-functionalized polymer, said monomer species selected from: nonionic monomers; cationic monomers; anionic monomers; zwitterionic monomers; and any combination of the foregoing; and a sizing amount of a sizing composition, wherein the one or more aldehyde-functionalized polymers have a weight average molecular weight of at least about 50,000 g/mole, wherein the sizing composition comprises rosin sizes, alkylene ketene dimers, alkenyl succinic anhydrides, and combinations thereof, and wherein the one or more aldehyde-functionalized polymers is stably present in an amount from 2 wt% to 33 wt%, based on total weight of the composition."

XI. Claim 1 of the **first auxiliary request** differed from claim 1 of the main request in that the following feature was added at the end of the claim:

"and wherein the composition further comprises a solids content ranging from about 0.1 to about 10 wt.% in an aqueous phase".

XII. The appellant's arguments, in so far as they are pertinent for the present decision, may be derived from the reasons for the decision below. They are essentially as follows:

(a) The subject-matter of claim 1 of the main request did not involve an inventive step when starting

from example 4 of D2 as the closest prior art, optionally in combination with D3.

- (b) The first auxiliary request was not substantiated in the rejoinder to the statement of grounds of appeal and should not be taken into account pursuant to Article 12(4) RPBA. In addition, it should also not be admitted pursuant to Article 13(2) RPBA 2020.

XIII. The respondent's arguments, in so far as they are pertinent for the present decision, may be derived from the reasons for the decision below. They are essentially as follows:

- (a) The subject-matter of claim 1 of the main request involved an inventive step when starting from example 4 of D2 as the closest prior art, even taking D3 into account.
- (b) Considering that the first auxiliary request was self-explanatory, it was neither justified that it be not taken into account pursuant to Article 12(4) RPBA, nor that it be not admitted pursuant to Article 13(2) RPBA 2020.

Reasons for the Decision

Main request

1. The operative main request is the first auxiliary request on which the decision under appeal is based, which was held by the opposition division to involve an inventive step starting from example 4 of D2 as the

closest prior art.

2. Article 56 EPC

2.1 At the oral proceedings before the Board, the following preliminary conclusions regarding inventive step that were indicated in the Board's communication pursuant to Article 15(1) RPBA 2020 (sections 7.1 to 7.3 and 7.4.1.b) remained undisputed:

- Example 4 of D2 constituted the closest prior art for the subject-matter of operative claim 1;

- The subject-matter of claim 1 differed from the sizing composition prepared in example 4 of D2 in the following features:

- (a) the aldehyde-functionalised polymer defined therein should have a weight average molecular weight of at least 50,000 g/mole (which was not shown to be disclosed in D2, in particular for the aldehyde-functionalised terpolymer used in example 4 thereof, and for which no additional information was present on file); and

- (b) the aldehyde-functionalised polymer should be present in an amount ranging from 2 to 33 wt%, based on the total weight of the composition (which was not shown to be disclosed for the aldehyde-functionalised terpolymer used in example 4 of D2).

- The objective technical problem solved over example 4 of D2 resided in the provision of an alternative sizing composition comprising an aldehyde-functionalised polymer as an emulsion

stabiliser in paper and paperboard production.

- The weight average molecular weight according to above distinguishing feature (a) was arbitrary and did not contribute to an inventive step.

2.2 Under these circumstances, it remains only to be assessed if it was obvious to provide an alternative to the sizing composition of example 4 of D2 by using in that composition the aldehyde-functionalised terpolymer of example 4 of D2 in an amount ranging from 2 to 33 wt%, based on the total weight of the composition (as specified in operative claim 1 and according to feature (b) identified above).

2.3 In that respect, the parties' arguments were all related to the indication in D2 that the terpolymer taught therein - which corresponds to the aldehyde-functionalized polymer according to operative claim 1 - could be present in amount from "about 0.1 to about 1.5 weight %" (D2: first to fourth lines of paragraph 8 on page 3; second to fifth lines of paragraph 19 on page 7). In addition, the following two issues were in dispute between the parties during the appeal proceedings:

- (a) Whether the maximum amount of "1.5 wt%" terpolymer disclosed in paragraphs 8 and 19 of D2 was encompassed by the range of "from 2 wt% to 33 wt%" specified in claim 1 of the main request; and
- (b) Whether it would have been obvious for the skilled person to solve the problem posed by using a polymer as defined in operative claim 1 in an amount of e.g. 2 wt%, even if said amount were understood to be higher than the highest amount

disclosed in paragraph 19 of D2 as held by the respondent.

However, in view of the negative decision reached by the Board in respect of inventive step based on issue (b), which is taken independently of the outcome in regard of issue (a) (see in particular sections 2.4.1 and 2.4.2 below), there is no need to address issue (a) in the present decision.

2.4 Regarding the question whether or not it was obvious for the skilled person to solve the problem posed by using a polymer as defined in operative claim 1 in an amount of e.g. 2 wt% (issue (b) above), the established case law of the Boards of Appeal of the EPO is that the answer to the question as to what a person skilled in the art would have done depends on the technical result (s)he wished to obtain (see e.g. T 939/92, OJ EPO 1996, 309: point 2.5.3 of the reasons; see also Case Law of the Boards of Appeal of the EPO, 10th edition, 2022, I.D.5).

2.4.1 In the case in hand, it must therefore be considered that the skilled person is deemed to be merely seeking to provide further sizing compositions for paper and paperboard production in alternative to the one of example 4 of D2 but is not even wishing to necessarily keep all properties obtained with said composition of D2 at the same level. In that respect, although D2 discloses in paragraphs 8 and 19 thereof an upper limit of "about 1.5 wt%" for the terpolymer, it is derivable from the wording used in these passages (paragraph 8: "the ... emulsion can comprise .."; paragraph 19: "*For instance, the emulsion can contain ...*", emphasis in italics by the Board) that these indications are merely given as an example of amounts that can suitably be

used and not as mandatory measures which must be respected. In particular, D2 was not shown to contain any information which would indicate that using higher amounts would be detrimental for any reason. Also, no arguments were put forward by the respondent that the skilled person would have had any reasons to disregard such (higher) amounts of terpolymer. Therefore, the Board is satisfied that the skilled person seeking a mere alternative to the sizing composition of example 4 of D2 would consider it obvious to use the terpolymer taught therein even in amounts higher than the ones disclosed in paragraphs 8 and 19 of D2, in particular in an amount which is only slightly higher (e.g. 2 wt% vs. 1.5 wt%). In doing so, the skilled person would be at most merely accepting possible disadvantages (which were neither even demonstrated, nor alleged in the present case) related to the use of higher amounts of such a terpolymer. In that respect, it is further noted that, in view of the evidence on file and of the parties' submissions, it is not credible that increasing the amount of the terpolymer according to D2 from 1.5 wt% as taught in D2 to an amount of 2 wt% as defined in claim 1 of the main request may be expected to lead to so dramatic changes in the properties of the sizing composition that the skilled person would be deterred from using such an amount of polymer.

- 2.4.2 The above conclusion is also valid considering that the terpolymer according to D2 is known to be a stabiliser for the emulsion of the sizing composition (see e.g. D2: paragraphs 3 and 7) and that, as put forward by the appellant, such polymeric stabilisers are known to be suitably used in amounts of 2 wt% or even higher (statement of grounds of appeal: page 7, fifth paragraph with reference to D3; letter of 26 October 2022: page 3, fourth to sixth paragraphs).

In that respect, it is noted that the respondent acknowledged during the oral proceedings before the Board that the objection of the appellant relying on the combination of D2 with D3 was already mentioned in the statement of grounds of appeal (see page 7, fifth paragraph thereof). Therefore, it was accepted that said objection was not late-filed and the request that said objection be not admitted (letter of 14 November 2022: section 1.2, second paragraph) was not pursued any longer. In that regard, although it is correct that the teaching of D3 is not directed to aldehyde-functionalized polymers according to D2 (and as defined in operative claim 1), the Board is satisfied that D3 supports the appellant's view that the skilled person knows that such polymeric stabilisers can generally be used in amounts of 2 wt% or higher and would in any case, based on this knowledge, not be deterred from using the terpolymer according to D2 in an amount of 2 wt% or higher. Therefore, the teaching of D3 relied upon by the appellant further confirms the conclusion reached in section 2.4.1 in view of the teaching of D2 alone.

2.4.3 At the oral proceedings before the Board, the respondent argued that the modification of the amount of terpolymer used in example 4 of D2 could not be obvious because D2 did not provide any information in that regard for said example 4. Therefore, the skilled person would have had no motivation to concentrate on that feature and/or to contemplate modifying it.

However, although it is correct that D2 contains no explicit information regarding the amount of terpolymer used therein, the skilled person confronted with example 4 of D2 and aiming at providing an alternative thereto would have, in order to prepare a similar

composition, to choose to work with a particular amount of terpolymer. To do so, the skilled person would have to rely on the disclosure in that regard indicated in D2, which is given at paragraphs 8 and 19 thereof. For that reason, the respondent's argument is not persuasive.

- 2.4.4 The respondent further argued that the reading of D2 made by the Board in above sections 2.4.1 and 2.4.2 did not take into account the disclosed context of D2 and what the skilled person would understand from said disclosure (letter of 21 October 2022: section 1.3, starting from the second paragraph on page 3 and ending on page 4). In particular, using an amount of at least 2 wt% constituted a deviation from the highest value taught in D2 by at least 33 %, which could not be considered as an obvious modification of the disclosure of D2, in particular in the absence of any motivation to do so.

However, as already indicated in section 2.4.1 above, the Board considers that, in view of the disclosure of D2 as a whole, the highest value of 1.5 wt% for the amount of terpolymer explicitly indicated in paragraphs 8 and 19 of D2 can only be understood as a mere example of a suitable amount to be used and not as an obligatory measure to take in order to carry out the invention according to D2. In particular, in the absence of any counter-indication, either in D2 itself or in any other prior art document(s), regarding the use of an amount of e.g. 2 wt%, such an amount of terpolymer is held to constitute an obvious measure to take in order to provide a mere alternative to the closest prior art. In particular, it was not shown that such an amount, even if it corresponds to an increase of more than 33 % as compared to the teaching of D2,

would be such that the skilled person seeking for a mere alternative would not contemplate it.

In addition, the Board's conclusion is reached considering that, since the problem to be solved resides in the provision of a mere alternative to the closest prior art, as the patent does not show any technical effect compared to example 4 of D2, there is no need for a motivation or a hint in the prior art to undertake the modification needed in order to arrive at the subject-matter being claimed. It is rather sufficient that such a modification remains within the ambit of the teaching of the prior art document (here D2) or is usual in the art (as derivable from D3, which can optionally be considered as a combination document). In doing so, the Board is satisfied that the above conclusion is not reached based on hindsight, as held by the respondent, but by considering which modifications of the prior art disclosure would be considered to be obvious by the skilled person aiming at solving the problem posed.

For these reasons, the respondent's arguments did not convince.

- 2.4.5 In view of the above and considering the teaching of D2 either alone or, optionally, in combination with D3, it was obvious to provide a mere alternative to the sizing composition according to example 4 of D2 by using therein a terpolymer with a weight average molecular weight of at least 50,000 g/mole and in an amount from 2 wt% to 33 wt% as defined in operative claim 1.
- 2.5 It is the Board's understanding that, in the decision under appeal, the opposition division acknowledged an inventive step considering *inter alia* that the

compositions being claimed did not require the use of starch as was done in D2 (decision under appeal: page 19, second and fourth paragraphs).

However, considering that the absence of starch is not reflected in the wording of operative claim 1, said argument is not persuasive. The same is valid regarding the mentioned improvement in sizing relied upon (reasons of the decision: page 19, end of fourth paragraph) since the problem to be solved resides, as indicated above, in the provision of a mere alternative.

These conclusions, which were communicated to the parties well in advance of the oral proceedings before the Board (section 7.4.3 of the Board's communication), remained uncontested.

- 2.6 For these reasons, the subject-matter of claim 1 of the main request does not involve an inventive step and the main request is not allowable.

First auxiliary request

3. Admittance

- 3.1 The appellant requested that the first auxiliary request be not admitted into the proceedings pursuant to Article 12(4) RPBA 2007 because it was not substantiated in the rejoinder to the statement of grounds of appeal.

- 3.2 The appellant's objection is based on the established case law that an auxiliary request filed at the beginning of the appeal proceedings (with the statement of grounds of appeal or with the rejoinder thereto)

which was not substantiated in a party's submission according to Article 12(2) RPBA 2007 is not to be taken into account for that reason by virtue of Article 12(4) RPBA 2007 (Case Law, *supra*, V.A.5.12.6, citing T 1890/09 and T 217/10; see also T 420/14). In particular, requests that are not self-explanatory are held as not validly filed and to become effective only at the date on which they are substantiated (Case Law, *supra*, V.A.5.12.6, paragraphs dealing with T 1784/14, T 568/14 and T 319/18).

- 3.2.1 In that respect, it was not disputed by the respondent (in particular at the oral proceedings before the Board) that the first auxiliary request was submitted for the first time with their rejoinder to the statement of grounds of appeal.
- 3.2.2 In the rejoinder to the statement of grounds of appeal, the respondent merely indicated that claim 1 of the first auxiliary request differed from claim 1 of the main request in that it was further specified that the composition being claimed further comprised a solids content ranging from about 0.1 to about 10 wt% in an aqueous phase and that said auxiliary request constituted a fall-back position (rejoinder: page 13, last paragraph).

In that respect, the Board agrees with the findings of decision T 687/15 (see in particular point 2.1 of the reasons), which was relied upon by the appellant (letter of 29 September 2022: top of page 3), that the mere statement that an auxiliary request constitutes a fall-back position does not allow the Board and the appellant to understand the rationale behind the request and, for that reason, does not fulfil the substantiation requirements of Article 12(2) RPBA 2007

(whose wording is in essence identical to the one of Article 12(3) RPBA 2020, in as far as both articles require that "The statement of grounds of appeal and the reply shall contain a party's complete case. They shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the facts, arguments and evidence relied on").

3.2.3 In view of the above, the respondent has in particular not provided any arguments how the amendments made could contribute to novelty over D1 and/or inventive step when taking example 4 of D2 as the closest prior art, which were objections raised or maintained by the appellant in their statement of grounds of appeal. In particular, it is noted that the amendments made consist of the features specified in claim 8 of the patent in suit, whereby it was already argued by the appellant in their notice of opposition that this feature did not contribute to an inventive step over D2 as the closest prior art (notice of opposition: bottom of page 12). Therefore, not only the respondent could have been expected to provide some substantiation in support of the amendments made in claim 1 of the first auxiliary request, but he would even have had good reasons to do so in respect of inventive step starting from D2.

3.2.4 The respondent put forward that such a substantiation was in the present case not necessary because the first auxiliary request was self-explanatory (letter of 21 October 2022: page 4, penultimate paragraph to bottom of page 5).

However, the features that were added to claim 1 of the

first auxiliary request were not additional limitations of features which were present in claim 1 of the main request. Therefore, it cannot be held that the line of defense put forward by the respondent for the first auxiliary request was self-explanatory in view of the argumentation put forward for the main request. In particular, regarding inventive step over D2, it was not readily understandable whether the respondent considered that the added features were e.g. derivable from the teaching of D2 alone or not, and/or whether said added features were intended to be related to the presence of an unexpected effect (which would necessitate a reformulation of the problem to be solved) and/or why said features were not obvious in view of D2, optionally in combination with the other cited prior art documents. Under these circumstances, the Board considers that the substantiation of the first auxiliary request cannot be regarded as self-explanatory, contrary to the respondent's view.

- 3.2.5 Since the first auxiliary request was neither substantiated in the rejoinder to the statement of grounds of appeal, nor can it be held to be self-explanatory, the Board decided not to take it into account pursuant to Article 12(4) RPBA 2007.

- 3.3 Considering that at least some substantiation why the first auxiliary request was novel over D1 and involved an inventive step in view of D2 as the closest prior art document was provided by the respondent with their letter of 21 October 2022 (section 2), the question arose if the first auxiliary request should be held to have been validly filed with said written submission and be admitted into the proceedings for that reason.

3.4 However, assuming - to the respondent's benefit - that the first auxiliary request was substantiated with the respondent's letter of 21 October 2022, it became effective only at that date, which is after the summons to oral proceedings was notified to the parties. Consequently, the filing of the duly substantiated first auxiliary request on 21 October 2022 constituted an amendment to the respondent's case, the admittance of which is subject to the stipulations of Article 13(2) RPBA 2020. In that regard, these stipulations provide that an amendment to a party's case made after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

However, no cogent reasons were indicated by the respondent to justify the late substantiation in support of the first auxiliary request. Also the Board cannot identify any. In particular, the respondent should have taken into account from the outset of the appeal proceedings that the Board could overturn the opposition division's decision in respect of inventive step starting from D2 as the closest prior art document. The fact that the Board did so cannot be deemed surprising and cannot justify the filing of the substantiation of an auxiliary request addressing an issue raised by the appellant at the outset of the appeal at such a late stage of the proceedings. In the case in hand, there is no doubt that the respondent had reasons to file such a request together with a proper substantiation earlier, namely in direct reply to the statement of grounds of appeal. In view of the above, there are no exceptional circumstances in the case in hand that may justify that the substantiation of the first auxiliary request be filed at such a late stage

of the proceedings. For these reasons, the first auxiliary request was not admitted into the proceedings (Article 13(2) RPBA 2020).

4. Since the main request is not allowable and the first auxiliary request is not admitted into the proceedings, the patent is to be revoked.

Order

For these reasons it is decided that:

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

The Registrar:

The Chairman:



D. Hampe

D. Semino

Decision electronically authenticated