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**Datasheet for the decision
of 21 October 2024**

Case Number: T 1865/22 - 3.3.02

Application Number: 17720839.4

Publication Number: 3374443

IPC: C09D9/00

Language of the proceedings: EN

Title of invention:

A NON-AQUEOUS STRIPPING COMPOSITION AND A METHOD OF STRIPPING
AN ORGANIC COATING FROM A SUBSTRATE

Patent Proprietor:

Atotech Deutschland GmbH & Co. KG

Opponent:

CHEMETALL GmbH

Relevant legal provisions:

EPC Art. 56
RPBA 2020 Art. 13(1), 13(2)
EPC R. 106

Keyword:

Inventive step
Amendment to appeal case
Obligation to raise objections - objection dismissed

Decisions cited:

G 0002/21

Catchword:

The mere fact that claimed subject-matter excludes a technical feature disclosed in the closest prior art as being essential or advantageous for a technical effect cannot in itself establish the existence of an inventive step. Rather, where the exclusion of the technical feature in question is the only feature distinguishing the claimed subject-matter from the closest prior art, it must be shown that the claimed subject-matter achieves said technical effect to an extent comparable to that of the closest prior art, even without this feature. Without such proof, the claimed subject-matter merely results in an obvious deterioration of the technical effect described in the closest prior art (see point 5.3 of the Reasons).



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Case Number: T 1865/22 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 21 October 2024

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
30 May 2022 concerning maintenance of the
European Patent No. 3374443 in amended form.**

Composition of the Board:

Chairman M. O. Müller
Members: A. Lenzen
B. Burm-Herregodts

Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent (appellant) against the decision of the opposition division (decision under appeal) that European patent No. 3 374 443 (patent) in amended form meets the requirements of the EPC.

II. Reference is made in the present decision to the following document filed with the opposition division:

D7 EP 0 860 479 A2

III. With the reply to the statement of grounds of appeal, the patent proprietor (respondent) filed, *inter alia*, the set of claims of auxiliary request 0 and the following documents:

Annex I The respondent's reply to the notice of opposition

Annex II The respondent's submission filed with the opposition division on 28 February 2022

IV. In preparation for the oral proceedings, arranged at the parties' request, the board issued a communication under Article 15(1) RPBA.

V. Oral proceedings before the board were held on 21 October 2024 by videoconference in the presence of both parties. During the oral proceedings, the board decided:

- not to admit the respondent's submission according to which the feature "non-aqueous" in claim 1 of

the main request was a distinguishing feature over example 2 of D7

- not to admit the respondent's submissions, based on Annexes I and II, that:
 - the lower concentration of component B resulted in a stripping composition with lower viscosity and consequently a stripping composition that was easier to filter
 - the lower concentration of component B and, if applicable, the lower concentration of component C resulted in a stripping composition that caused less damage to the substrate upon incorporation of water during use, in other words, a stripping composition that was more tolerant to water
- not to remit the case to the opposition division for further prosecution
- to dismiss the respondent's objection under Rule 106 EPC

VI. The parties' requests relevant to the present decision at the end of the oral proceedings were as follows.

The appellant requested that:

- the decision under appeal be set aside and the patent be revoked in its entirety
- auxiliary requests 0 and 1 to 11 not be admitted
- the respondent's argument not be admitted according to which D7 required a careful selection of ingredients

The respondent requested that:

- the appeal be dismissed, implying that the decision under appeal be confirmed and the patent be maintained in the form considered allowable by the opposition division (main request)
- in the alternative, that the patent be maintained in amended form based on one of the following sets of claims:
 - auxiliary request 0, filed with the reply to the statement of grounds of appeal
 - auxiliary requests 1 to 9, filed with the reply to the notice of opposition
 - auxiliary request 10 or 11, filed on 28 February 2022

VII. Summaries of the parties' submissions relevant to the present decision as well as key aspects of the decision under appeal are set out in the reasons for the decision below.

Reasons for the Decision

Main request (patent in amended form considered allowable by the opposition division) - Inventive step (Article 56 EPC)

1. Claim 1 reads as follows (alternative subject-matter not relevant for the following assessment has been omitted for the sake of brevity):

"A non-aqueous stripping composition, comprising:

- A- *at least one high-boiling solvent at a concentration from 70 % by weight to 95 % by weight selected from the group, consisting of alcohols having general chemical formula R-OH, wherein R is a C₄-C₃₀ hydrocarbon group, wherein the high-boiling solvent has a*

- boiling point of at least 100 °C;*
- B- *at least one high-boiling co-solvent at a concentration from 2 % by weight to 20 % by weight selected from the group, consisting of high-boiling glycols, glycol ethers and amine compounds, wherein the high-boiling co-solvent has a boiling point of at least 100 °C; and*
- C- *at least one pH-active agent at a concentration from 0.01 % by weight to 5 % by weight [...] selected from the group, consisting of metal hydroxide compounds [...];*
- wherein the sum of all constituents does not exceed the total of 100 % by weight."*

Claim 1 relates to a stripping composition. Such compositions are typically used to remove an organic coating (such as a paint) from a metallic substrate.

2. Closest prior art

2.1 D7 (page 2, lines 3 to 4) also relates to stripping compositions. The parties agreed that it can be regarded as the closest prior art in the current case.

2.2 According to D7 (page 2, lines 8 to 21), stripping compositions generally comprise the following three components:

- a penetrating agent, typically an organic solvent such as DCM or NMP, which swells or solubilises the coating
- an accelerator, typically a strong alkali, which acts to break down the organic coating to cause it to be stripped

- a coupling agent, typically an alcohol, which brings components 1 and 2 above together to form a single-phase stable mixture

The use of such compositions for stripping organic coatings from substrates made of aluminium, magnesium or zinc poses the problem that these metallic substrates are prone to etching if water gets into the stripping bath.

2.3 The solution to this problem offered by D7 (claim 1) is based on the combination of a strong alkali accelerator with specific penetrating and coupling agents, i.e.:

- a penetrating agent comprising benzyl alcohol
- a coupling agent comprising a glycol, a glycol ether or mixtures of these

Example 2 of D7, which the parties agreed can be regarded as a suitable starting point for the assessment of inventive step, discloses a stripping composition consisting of the following components (in % by weight):

- (a) benzyl alcohol (71.5) as the penetrating agent
- (b) monoethylene glycol (25) as the coupling agent
- (c) potassium hydroxide (3.5) as the strong alkali accelerator

This stripping composition is tested in D7 for its effectiveness on coated aluminium panels. The panels are immersed in the stripping composition and water is added in increments of 0.5% by weight. Example 2 states that etching of the metal substrate does not take place until the water content exceeds 2% by weight.

Thus, in other words, example 2 investigates how much water the original stripping composition can tolerate without etching, i.e. damaging, the metal substrate during stripping.

3. Distinguishing feature

3.1 With respect to example 2 of D7, the parties agreed that:

- components (a), (b) and (c), i.e. benzyl alcohol, monoethylene glycol and potassium hydroxide, correspond to components A, B and C of claim 1 of the main request
- the concentrations of components (a) and (c), i.e. benzyl alcohol and potassium hydroxide, are as required for components A and C in claim 1 of the main request

3.2 The parties also agreed that the subject-matter of claim 1 of the main request differs from example 2 of D7 in that the concentration of component B is "*from 2 % by weight to 20 % by weight*", i.e. lower than that of the corresponding component (b), i.e. monoethylene glycol, in example 2 of D7 (25% by weight).

However, at the oral proceedings before the board, the parties disagreed as to whether this is the only distinguishing feature.

More specifically, the respondent submitted for the first time in the appeal proceedings that the subject-matter of claim 1 of the main request differed from example 2 of D7 in that it also related to a non-aqueous composition. At the request of the appellant,

the board decided not to admit this submission (for the reasons, see below).

3.3 Consequently, the (lower) concentration of component B is the only feature that distinguishes the subject-matter of claim 1 of the main request from example 2 of D7.

4. Technical effects and objective technical problem

4.1 At the oral proceedings before the board, the respondent submitted for the first time in the appeal proceedings that the distinguishing feature was associated with technical effects. The stripping composition (i) had a lower viscosity and, as a consequence of this, was easier to filter and (ii) caused less damage to the substrate upon incorporation of water during use. In other words, the stripping composition was more tolerant to water. At the request of the appellant, the board decided not to admit these submissions (for the reasons, see below).

4.2 In the absence of any further arguments from the respondent, the distinguishing feature identified above is not associated with any technical effect.

4.3 In agreement with the appellant, the objective technical problem is therefore to provide an alternative stripping composition.

5. Obviousness

5.1 Arbitrarily varying the concentrations of components in a composition, including changing the concentration of one component in favour or to the detriment of the

other components, is routine for the skilled person. Such a measure does not involve an inventive step.

For example, by reducing the concentration of monoethylene glycol in example 2 of D7 by 10% by weight in favour of benzyl alcohol, the skilled person would ultimately have obtained, in an obvious manner, a composition comprising:

- (a) 81.5 (= 71.5 + 10)% by weight of benzyl alcohol
- (b) 15 (= 25 - 10)% by weight of monoethylene glycol
- (c) 3.5% by weight of potassium hydroxide

This composition falls within the subject-matter of claim 1 of the main request.

- 5.2 When starting from example 2 of D7, the skilled person would have already settled on an appropriate combination of penetrating agent (benzyl alcohol), coupling agent (monoethylene glycol) and strong alkali accelerator (potassium hydroxide). Therefore, contrary to the respondent's submission, it would not have been necessary to carefully select components such as a specific coupling agent depending on the penetrating agent and accelerator.

Since this argument from the respondent is not convincing, there was no need to decide on the appellant's request at the oral proceedings for it not to be admitted.

- 5.3 The respondent also argued that the skilled person would not have reduced the amount of the coupling agent monoethylene glycol in example 2 of D7. The reason for this was that, according to D7, high concentrations of the coupling agent were essential for the stripping

composition to have an appropriate tolerance to water. Mainly because of this argument, the opposition division acknowledged an inventive step based on D7 as the closest prior art.

The board does not consider this argument to be convincing since it requires that the objective technical problem be reformulated. If reducing the concentration of the coupling agent monoethylene glycol necessarily worsens the tolerance to water of example 2 of D7 as argued by the respondent, from a logical point of view, the same deterioration must apply to the subject-matter of claim 1 of the main request. The reason for this is that the lower concentration of compound B, which corresponds to the coupling agent monoethylene glycol of D7 (see above), is the only feature that distinguishes the subject-matter of claim 1 of the main request from example 2 of D7. Following the respondent's argument, the objective technical problem should be to provide a stripping composition with a poorer tolerance to water. The solution to this problem by reducing the concentration of the coupling agent monoethylene glycol would have been obvious - nothing would have prevented the skilled person from reducing its concentration if only a lower tolerance to water had been required.

More generally, the mere fact that claimed subject-matter excludes a technical feature (here: the higher concentration of the coupling agent monoethylene glycol as disclosed in example 2 of D7) disclosed in the closest prior art as being essential or advantageous for a technical effect (here: the advantageous effect of the higher concentration of the coupling agent monoethylene glycol on the tolerance to water) cannot in itself establish the existence of an inventive step.

Rather, in situations such as the present one, where the exclusion of the technical feature in question is the only feature distinguishing the claimed subject-matter from the closest prior art, it must be shown that the claimed subject-matter achieves said technical effect to an extent comparable to that of the closest prior art, even without this feature. Without such proof, the claimed subject-matter merely results in an obvious deterioration of the technical effect described in the closest prior art.

- 5.4 It follows that the subject-matter of claim 1 of the main request is not based on an inventive step over D7 alone and that the main request is not allowable.

Main request - Admittance of submissions made by the respondent at the oral proceedings before the board (Article 13(1) and 13(2) RPBA)

6. As mentioned above, at the oral proceedings before the board, the respondent submitted that:
- the subject-matter of claim 1 of the main request additionally differed from example 2 of D7 in that it related to a non-aqueous composition
 - the distinguishing feature over example 2 of D7, i.e. the (lower) concentration of component B in claim 1 of the main request ("*2 % by weight to 20 % by weight*") was associated with two technical effects, namely (i) a lower viscosity and, as a result of this, a better filterability and (ii) less damage to the substrate upon incorporation of water during use, in other words, a higher tolerance to water

At the appellant's request, the board decided not to admit these submissions (Article 13(1) and (2) RPBA). The reasons are as follows.

7. Since the above submissions were made during the oral proceedings before the board, Articles 13(1) and 13(2) RPBA are relevant. Both articles concern the admittance of an amendment to a party's appeal case. The point of reference for examining whether there is an amendment to a party's appeal case under Article 13 RPBA is the statement of grounds of appeal or the reply to it (Case Law of the Boards of Appeal of the EPO, 10th edn., 2022 (CLBA), V.A.4.2). Since the current case concerns the admittance of submissions made by the respondent, the relevant point of reference is its reply to the statement of grounds of appeal (reply).

7.1 According to the respondent, the word "water" was mentioned several times in the last two paragraphs on page 31 of the reply. It was clear that this alluded to the additional distinguishing feature "non-aqueous" (first indent under point 6 above).

However, these two paragraphs relate exclusively to D7 and the question of obviousness over this document. No reference is made in these paragraphs to the wording of a claim or even a distinguishing feature.

7.2 As regards the two technical effects (i) and (ii) (second indent under point 6 above), the respondent conceded at the oral proceedings that it had not addressed or explained them in its reply.

7.3 Therefore, since no reference to the additional distinguishing feature "non-aqueous" and the technical effects can be found in the reply, the respondent's

corresponding submissions at the oral proceedings constitute an amendment to its appeal case.

7.4 The respondent argued that it had filed Annexes I and II together with its reply in the appeal case. These annexes were its reply to the notice of opposition and a further written submission filed before the opposition division. In its reply, the respondent had referred to these annexes (reply, page 2, first two paragraphs under point B.I):

"We maintain our requests and arguments provided in the first instance in response to the notice of opposition dated February 22, 2021 and in response to the Opposition Division's (OD) preliminary opinion and to the Appellant's written submission thereto dated February 28, 2022.

For ease of reference and to streamline and focus on the Appellant's argument in the statement of grounds of appeal ("statement" hereinafter), the Patentee's written submissions as well as the main request (MR) and the auxiliary requests (AR) AR1 to AR11 of the opposition proceedings being maintained are enclosed herewith as

Annex I: *written submission of February 22, 2021;*

Annex II: *written submission of February 28, 2022;*

Annex III: *MR and AR1 to AR11."*

Therefore, according to the respondent, Annexes I and II had been part of its appeal case from the beginning of the appeal proceedings. Since the respondent had provided arguments on the additional distinguishing feature and the technical effects in Annexes I and II, the corresponding submissions made at the oral proceedings before the board did not constitute an amendment to its appeal case.

7.5 The board cannot agree with this. Under established case law, the parties' written submissions filed before the opposition division do not automatically form part of the appeal proceedings (CLBA, V.A.4.2.2 b)). Nor do they become part of the appeal proceedings merely because they are resubmitted on appeal and referred to in general terms, as in the current case (see quote above). The board notes that, in addition to the passage referred to under the previous point, the reply contains only very general references to Annexes I and II (page 23, last paragraph under point E; page 28, penultimate paragraph). The respondent did not refer to these at the oral proceedings.

In the case at hand, the reference to the respondent's written submissions before the department of first instance was made without specifying exactly which parts of these submissions the respondent intended to rely on. If it were assumed that the respondent's written submissions filed before the opposition division are nevertheless part of the appeal proceedings, this would mean that it would be up to the appellant and the board to identify those parts that might be helpful to the respondent later in the appeal.

7.6 The above conclusion that the respondent's submissions at the oral proceedings constitute an amendment to its appeal case thus remains valid.

8. An amendment to a party's appeal case after notification of a summons to oral proceedings, must, as a rule, not be taken into account unless there are exceptional circumstances justified with cogent reasons by the party concerned (Article 13(2) RPBA). However, there are no exceptional circumstances in this case.

Contrary to the respondent's argument, the change of representative approximately three weeks before the oral proceedings does not qualify as an exceptional circumstance (CLBA, V.A.4.5.6 n)).

9. Further, under Article 13(1) RPBA, referring, *inter alia*, to Article 12(4) RPBA, the board must exercise its discretion in view of, *inter alia*, the complexity of the amendment.

9.1 As set out above, the stripping composition of example 2 of D7 consists of the three components benzyl alcohol, monoethylene glycol and potassium hydroxide. Water is not mentioned as one of the components of this composition. Since the subsequent addition of water serves to investigate the tolerance of this original stripping composition towards the incorporation of water during use, it would be absurd to assume that the original stripping composition already contained water. In other words, as set out by the appellant, a distinction must be made between the water content of the original stripping composition and its tolerance towards the incorporation of water during use.

The respondent's submission that the subject-matter of claim 1 of the main request differed from example 2 of D7 in that the stripping composition was "non-aqueous" therefore raises a complex issue in that it is not at all clear how this could or even should be the case in view of the disclosure of D7.

9.2 As pointed out by the appellant and not disputed by the respondent, the application as filed does not mention anything about a reduction in viscosity or an improvement in filterability. Against this background, the complex issue arises as to whether the respondent

can rely on these effects at all for the assessment of inventive step (G 2/21, order No. 2).

Furthermore, the two stripping compositions on pages 3 and 4 of Annex II, the comparison of which the respondent relied on as proof of the two technical effects, differ in terms of the concentration of each of the three components, as correctly pointed out by the appellant. This raises the complex issue of whether this comparison is suitable for showing that the two technical effects are actually associated with the distinguishing feature, which resides in the difference in concentration of only one of the three components.

- 9.3 In the board's view, these complex issues also clearly spoke against the admittance of the respondent's submissions (Article 13(1) RPBA).

10. Lastly, the appellant had already raised the inventive-step objection starting from D7 as the closest prior art in its statement of grounds of appeal. This objection was essentially adopted by the board in its communication under Article 15(1) RPBA and elaborated on by the appellant in a further written submission. Against this background, the respondent should have filed its submissions on the additional distinguishing feature "non-aqueous" and the two technical effects much earlier and not only at the oral proceedings before the board, i.e. at the latest possible stage of the appeal proceedings. Admitting these submissions would clearly have been contrary to procedural economy (Article 13(1) RPBA).

Auxiliary requests - Admittance of submissions made by the respondent at the oral proceedings before the board (Article 13(1) and 13(2) RPBA)

11. In claim 1 of auxiliary requests 0, 2, 4, 6 and 8, the concentration range for component B is the same as in claim 1 of the main request ("*from 2 % by weight to 20 % by weight*"). Therefore, the respondent's submission on claim 1 of the main request (see point 6 above) also applies, at least in principle, to claim 1 of auxiliary requests 0, 2, 4, 6 and 8. However, as explained above, this submission was not admitted. Moreover, the respondent did not make any submissions at the oral proceedings on the concentration range for component B in claim 1 of auxiliary requests 0, 2, 4, 6 and 8.

12. In claim 1 of auxiliary requests 1, 3, 5, 7 and 9 to 11, the concentration range for component B is different from that in claim 1 of the main request. In auxiliary requests 1, 3, 10 and 11, the concentration range is "*from 2 % by weight to 15 % by weight*"; in auxiliary requests 5, 7 and 9, the concentration range is "*from 4 % by weight to 15 % by weight*". Since the upper concentration limit in each of these cases (15% by weight) is even lower than that in claim 1 of the main request (20% by weight), in the same way as for claim 1 of the main request, the concentration range for component B in claim 1 of each of the auxiliary requests 1, 3, 5, 7 and 9 to 11 is a distinguishing feature over example 2 of D7.

In claim 1 of auxiliary request 11, the concentration range for component C ("*from 0.01 % by weight to 2 % by weight*") is also different from that in claim 1 of the main request ("*from 0.01 % by weight to 5 % by*

weight"). In view of the fact that example 2 of D7 contains 3.5% by weight of potassium hydroxide (which the parties agreed corresponds to component C of claim 1, see above), the concentration range for component C in claim 1 of auxiliary request 11 is a further distinguishing feature over example 2 of D7.

13. For these distinguishing features, i.e. the concentration ranges for component B ("*from 2 % by weight to 15 % by weight*" or "*from 4 % by weight to 15 % by weight*") and component C ("*from 0.01 % by weight to 2 % by weight*"), the respondent relied on the same technical effects as it did for the distinguishing feature of claim 1 of the main request (the concentration range for component B of "*from 2 % by weight to 20 % by weight*"). The lower concentration of component B resulted in a stripping composition with lower viscosity and consequently a stripping composition that was easier to filter. Furthermore, the lower concentration of component B and, if applicable, the lower concentration of component C resulted in a stripping composition that caused less damage to the substrate upon incorporation of water during use, in other words, a stripping composition that was more tolerant to water.

The appellant requested that these submissions not be admitted. In support of admittance, the respondent again relied on the reference to Annexes I and II in its reply. It did not provide any further arguments. For the same reasons as given above (see points 7 to 10), the board decided not to admit the respondent's submissions on the alleged technical effects linked to the concentration ranges of components B and C in auxiliary requests 1, 3, 5, 7 and 9 to 11.

Auxiliary request 0 - Inventive step (Article 56 EPC)

14. The wording of claim 1 of auxiliary request 0 differs from that of claim 1 of the main request only in that the alternative subject-matter, which is omitted from the wording of claim 1 of the main request above (point 1) for the sake of brevity, has been deleted.

Therefore, the reasoning given for the subject-matter of claim 1 of the main request equally applies to that of claim 1 of auxiliary request 0.

The subject-matter of claim 1 of auxiliary request 0 is not based on an inventive step, and auxiliary request 0 is not allowable.

Auxiliary request 1 - Inventive step (Article 56 EPC)

15. Claim 1 of auxiliary request 1 differs from claim 1 of the main request only in that the concentration of component B is "*from 2 % by weight to 15 % by weight*" instead of "*from 2 % by weight to 20 % by weight*". Thus, the upper concentration limit for component B has been lowered from 20% by weight (main request) to 15% by weight (auxiliary request 1).

It follows that the subject-matter of claim 1 of auxiliary request 1 differs from example 2 of D7 in that the concentration of component B is "*from 2 % by weight to 15 % by weight*". The respondent's submission that this distinguishing feature was associated with technical effects was not admitted (see above, points 12 and 13). In the absence of any further arguments from the respondent, the objective technical problem is to provide an alternative stripping composition. By varying the concentrations of the three

components of example 2 of D7, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 1 without any inventive skills.

The subject-matter of claim 1 of auxiliary request 1 is not based on an inventive step, and auxiliary request 1 is not allowable.

Auxiliary request 2 - Inventive step (Article 56 EPC)

16. Claim 1 of auxiliary request 2 differs from claim 1 of the main request only in that component C has been limited to alkali metal hydroxide compounds.

However, this limitation does not result in a further distinguishing feature over example 2 of D7 since its component potassium hydroxide is an alkali metal hydroxide. Therefore, the reasoning given for the subject-matter of claim 1 of the main request equally applies to that of claim 1 of auxiliary request 2.

The subject-matter of claim 1 of auxiliary request 2 is not based on an inventive step, and auxiliary request 2 is not allowable.

Auxiliary request 3 - Inventive step (Article 56 EPC)

17. Claim 1 of auxiliary request 3 differs from claim 1 of the main request in that:

- the concentration of component B is "*from 2 % by weight to 15 % by weight*" (auxiliary request 3) instead of "*from 2 % by weight to 20 % by weight*" (main request)

- component C has been limited to alkali metal hydroxide compounds

Thus, claim 1 of auxiliary request 3 is a combination of claim 1 of auxiliary requests 1 and 2.

For the reasons given above for the subject-matter of claim 1 of auxiliary requests 1 and 2, the subject-matter of claim 1 of auxiliary request 3 is not based on an inventive step. Auxiliary request 3 is not allowable.

Auxiliary request 4 - Inventive step (Article 56 EPC)

18. Claim 1 of auxiliary request 4 differs from claim 1 of the main request in that:

- component B has been limited to glycol ethers and amine compounds
- component C has been limited to alkali metal hydroxide compounds

Only the first difference results in an additional distinguishing feature. More specifically, the subject-matter of claim 1 of auxiliary request 4 differs from example 2 of D7 in that:

- component B is selected from glycol ethers and amine compounds
- the concentration of component B is "*from 2 % by weight to 20 % by weight*"

No effect was invoked for the first distinguishing feature. The respondent's submission made during the discussion of the main request that the second distinguishing feature was associated with technical

effects was not admitted (see above, point 11). Consequently, the objective technical problem is to provide an alternative stripping composition. D7 not only suggests glycols, such as the monoethylene glycol of example 2 of D7, as a coupling agent but also glycol ethers (D7, claim 1). Against this background, the skilled person would have replaced the monoethylene glycol of example 2 of D7 with a glycol ether without inventive skills. By arbitrarily varying the concentrations of the resulting three components benzyl alcohol, glycol ether and potassium hydroxide, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 4.

Consequently, the subject-matter of claim 1 of auxiliary request 4 is not based on an inventive step. Auxiliary request 4 is not allowable.

Auxiliary request 5 - Inventive step (Article 56 EPC)

19. Claim 1 of auxiliary request 5 differs from claim 1 of the main request in that:

- component B is selected from glycol ethers and amine compounds
- the concentration of component B is "*from 4 % by weight to 15 % by weight*" (auxiliary request 5) instead of "*from 2 % by weight to 20 % by weight*" (main request)
- component C has been limited to alkali metal hydroxide compounds

Only the first difference results in an additional distinguishing feature. More specifically, the subject-

matter of claim 1 of auxiliary request 5 differs from example 2 of D7 in that:

- component B is selected from glycol ethers and amine compounds
- the concentration of component B is "*from 4 % by weight to 15 % by weight*"

No effect was invoked for the first distinguishing feature. The respondent's submission that the second distinguishing feature was associated with technical effects was not admitted (see above, points 12 and 13). Consequently, the objective technical problem is to provide an alternative stripping composition. D7 not only suggests glycols, such as the monoethylene glycol of example 2 of D7, as a coupling agent but also glycol ethers (D7, claim 1). Against this background, the skilled person would have replaced the monoethylene glycol of example 2 of D7 with a glycol ether without inventive skills. By arbitrarily varying the concentrations of the resulting three components benzyl alcohol, glycol ether and potassium hydroxide, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 5.

Consequently, the subject-matter of claim 1 of auxiliary request 5 is not based on an inventive step. Auxiliary request 5 is not allowable.

Auxiliary request 6 - Inventive step (Article 56 EPC)

20. Claim 1 of auxiliary request 6 differs from claim 1 of the main request in that:

- the concentration of component A is "*from 80 % by weight to 95 % by weight*" (auxiliary request 6) instead of "*from 70 % by weight to 95 % by weight*" (main request), i.e. the lower concentration limit for component A has been increased from 70% by weight (main request) to 80% by weight (auxiliary request 6)
- component C has been limited to alkali metal hydroxide compounds

Only the first difference results in an additional distinguishing feature because example 2 of D7 contains only 71.5% by weight of benzyl alcohol, which the parties agreed corresponds to component A of claim 1. Therefore, the subject-matter of claim 1 of auxiliary request 6 differs from example 2 of D7 in that:

- the concentration of component A is "*from 80 % by weight to 95 % by weight*"
- the concentration of component B is "*from 2 % by weight to 20 % by weight*"

No effect was invoked for the first distinguishing feature. The respondent's submission made during the discussion of the main request that the second distinguishing feature was associated with technical effects was not admitted (see above, point 11). Consequently, the objective technical problem is to provide an alternative stripping composition. As set out above, arbitrarily varying the concentrations of the three components of example 2 of D7 would not have required inventive skills. By doing this, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 6.

Consequently, the subject-matter of claim 1 of auxiliary request 6 is not based on an inventive step. Auxiliary request 6 is not allowable.

Auxiliary request 7 - Inventive step (Article 56 EPC)

21. Claim 1 of auxiliary request 7 differs from claim 1 of the main request in that:

- the concentration of component A is "*from 80 % by weight to 95 % by weight*" (auxiliary request 7) instead of "*from 70 % by weight to 95 % by weight*" (main request)
- component B is selected from glycol ethers and amine compounds
- the concentration of component B is "*from 4 % by weight to 15 % by weight*" (auxiliary request 7) instead of "*from 2 % by weight to 20 % by weight*" (main request)
- component C has been limited to alkali metal hydroxide compounds

Thus, claim 1 of auxiliary request 7 is a combination of claim 1 of auxiliary requests 5 and 6. For the reasons given above for claim 1 of auxiliary requests 5 and 6, the subject-matter of claim 1 of auxiliary request 7 is not based on an inventive step. Auxiliary request 7 is not allowable.

Auxiliary request 8 - Inventive step (Article 56 EPC)

22. Claim 1 of auxiliary request 8 differs from claim 1 of the main request in that:

- component B has been limited to a specific glycol ether, namely diethylene glycol butylether

- component C has been limited to alkali metal hydroxide compounds.

Only the first difference results in an additional distinguishing feature. More specifically, the subject-matter of claim 1 of auxiliary request 8 differs from example 2 of D7 in that:

- component B is diethylene glycol butylether
- the concentration of component B is "*from 2 % by weight to 20 % by weight*"

The respondent's submission made during the discussion of the main request that the second distinguishing feature was associated with technical effects was not admitted (see above, point 11). No effect was invoked for the first distinguishing feature. Consequently, the objective technical problem is to provide an alternative stripping composition. D7 not only suggests glycols, such as the monoethylene glycol of example 2 of D7, as a coupling agent but also glycol ethers (D7, claim 1). As pointed out by the board at the oral proceedings, the glycol ether referred to in claim 1, diethylene glycol butylether, constitutes merely an arbitrary choice among the general class of glycol ethers taught in D7. Against this background, the skilled person would have replaced the monoethylene glycol of example 2 of D7 with diethylene glycol butylether without inventive skills. Furthermore, by arbitrarily varying the concentrations of the resulting three components benzyl alcohol, diethylene glycol butylether and potassium hydroxide, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 8.

Consequently, the subject-matter of claim 1 of auxiliary request 8 is not based on an inventive step. Auxiliary request 8 is not allowable.

Auxiliary request 9 - Inventive step (Article 56 EPC)

23. Claim 1 of auxiliary request 9 differs from claim 1 of the main request in that:

- the concentration of component A is "*from 80 % by weight to 95 % by weight*" (auxiliary request 9) instead of "*from 70 % by weight to 95 % by weight*" (main request)
- component B has been limited to a specific glycol ether, namely diethylene glycol butylether
- the concentration of component B is "*from 4 % by weight to 15 % by weight*" (auxiliary request 9) instead of "*from 2 % by weight to 20 % by weight*" (main request)
- component C has been limited to alkali metal hydroxide compounds

Thus, claim 1 of auxiliary request 9 is a combination of claim 1 of auxiliary requests 7 and 8. For the reasons given above for the subject-matter of claim 1 of auxiliary requests 7 and 8, the subject-matter of claim 1 of auxiliary request 9 is not based on an inventive step. Auxiliary request 9 is not allowable.

Auxiliary request 10 - Inventive step (Article 56 EPC)

24. Claim 1 of auxiliary request 10 differs from claim 1 of auxiliary request 3 in that:

- component A is benzyl alcohol

- for component B "*the glycols comprise ethylene glycol or propylene glycol [...]*" (again, alternative subject-matter having been omitted for the sake of brevity)

However, these differences do not result in further distinguishing features over example 2 of D7 since this example comprises benzyl alcohol and monoethylene glycol. Therefore, the reasoning given for the subject-matter of claim 1 of auxiliary request 3 equally applies to that of claim 1 of auxiliary request 10.

The subject-matter of claim 1 of auxiliary request 10 is not based on an inventive step, and auxiliary request 10 is not allowable.

Auxiliary request 11 - Inventive step (Article 56 EPC)

25. Claim 1 of auxiliary request 11 differs from claim 1 of auxiliary request 3 only in that:

- the concentration of component C is "*from 0.01 % by weight to 2 % by weight*" (auxiliary request 11) instead of "*from 0.01 % by weight to 5 % by weight*" (auxiliary request 3), i.e. the upper concentration limit for component C has been reduced from 5% by weight (auxiliary request 3) to 2% by weight (auxiliary request 11)

This difference results in an additional distinguishing feature. More specifically, the subject-matter of claim 1 of auxiliary request 11 differs from example 2 of D7 in that:

- the concentration of component B is "*from 2 % by weight to 15 % by weight*"

- the concentration of component C is "*from 0.01 % by weight to 2 % by weight*"

The respondent's submissions that these distinguishing features were associated with technical effects were not admitted (see above, points 12 and 13).

Consequently, the objective technical problem is to provide an alternative stripping composition. By arbitrarily varying the concentrations of the three components of example 2 of D7, the skilled person would have arrived at a composition falling within the subject-matter of claim 1 of auxiliary request 11 without the need for inventive skills.

Consequently, the subject-matter of claim 1 of auxiliary request 11 is not based on an inventive step. Auxiliary request 11 is not allowable.

Objection under Rule 106 EPC

26. As set out above, the respondent did not submit anything at the oral proceedings on the concentration range for component B in claim 1 of auxiliary requests 0, 2, 4, 6 and 8. At most, the submissions on claim 1 of the main request apply, but these were not admitted (see point 11 above).
27. As also explained above, based on Annexes I and II, the respondent submitted that the concentration ranges for component B in auxiliary requests 1, 3, 5, 7 and 9 to 11 and the concentration range for component C in auxiliary request 11, being distinguishing features over example 2 of D7, were associated with two technical effects, namely, firstly, a higher viscosity/better filterability and, secondly, a higher tolerance

to water. However, these submissions were not admitted either (see points 12 and 13 above).

28. At the end of the oral proceedings, the respondent raised an objection under Rule 106 EPC against the board's decision on the non-admittance of the respondent's submissions on the basis of Annexes I and II on the allowability of auxiliary requests 1 to 11. The respondent was of the opinion that the board's decision on admittance violated its right to be heard under Article 113(1) EPC.

However, the board was unable to see any procedural defect leading to these non-admittance decisions. The respondent had had sufficient opportunity to comment on the admittance of its submissions in two rounds of discussion during the oral proceedings, and there can be no violation of the respondent's right to be heard in this respect. Therefore, the board decided to dismiss the respondent's objection.

Admittance of auxiliary requests and remittal

29. As is clear from the above, none of the auxiliary requests is allowable. There was, therefore, no need to decide at the oral proceedings on their admittance.
30. The appellant conditionally requested that the case be remitted to the opposition division for further prosecution.

The board decided to reject the appellant's request for remittal. Since the appellant is not adversely affected by this decision in view of the final decision to revoke the patent, there is no need to give reasons here.

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:



U. Bultmann

M. O. Müller

Decision electronically authenticated