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**Datasheet for the decision
of 7 February 2020**

Case Number: T 2256/16 - 3.3.06

Application Number: 07751097.2

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C11D3/20, C11D3/22

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Title of invention:
SURFACE ACTIVE BLEACH AT DYNAMIC PH

Patent Proprietor:
The Procter & Gamble Company

Opponent:
Dalli-Werke GmbH & Co. KG

Headword:
SURFACE ACTIVE BLEACH/The Procter & Gamble Company

Relevant legal provisions:
EPC Art. 54, 56, 83, 123(2)

Keyword:

Amendments - allowable (yes)

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - non-obvious modification

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

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Case Number: T 2256/16 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 7 February 2020

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
1 August 2016 maintaining European Patent
No. 1991651 in amended form.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: P. Ammendola
C. Heath

Summary of Facts and Submissions

- I. These appeals were filed by the patent proprietor and by the sole opponent against the interlocutory decision of the opposition division that, on the basis of the then pending Auxiliary Request 1, the patent in suit met the requirements of the EPC.
- II. In response to the board's preliminary opinion, the proprietor replied with letter of 18 December 2019 enclosed with four sets of amended claims labelled as Auxiliary Requests 6 to 9, with claims 1 and 2 of Auxiliary Request 6 reading:

*"1. A method for cleaning at least a portion of a surface and/or fabric comprising:
optionally washing and/or rinsing the surface and for fabric;
contacting the surface and/or fabric with a wash liquor comprising:
a perhydrolase enzyme,
hydrogen peroxide and/or a source of hydrogen peroxide,
and a substrate for the enzyme, comprising an ester,
wherein the initial pH of the wash liquor is alkaline and the amount of perhydrolase enzyme and substrate is sufficient to drop the pH of the wash liquor to a pH of less than 6.5 for a period of at least two minutes; and optionally washing and/or rinsing said surface and/or fabric,
wherein said contacting occurs during a wash cycle."*

"2. The method of Claim 1, wherein the drop in pH from alkaline to acidic pH solubilizes fatty acid residues and improves the performance of a laundry component having optimal activity at acidic pH."

The remaining claims 3 to 6 define preferred embodiments of the method of claim 1.

III. At the oral proceedings the proprietor only maintained Auxiliary Requests 6 to 9 and withdrew all higher ranking requests.

IV. At the closure of the debate, the parties' final requests were as follows:

The **opponent** requested that the decision under appeal be set aside and the patent be revoked.

The **proprietor** requested that the decision under appeal be set aside and the patent be maintained on the basis of one of Auxiliary Requests 6 to 9 filed with letter of 18 December 2019.

V. In respect to Auxiliary Request 6 the opponent submitted that its claims 1 and 2 contravened Article 123(2) EPC, that its claimed subject-matter was insufficiently disclosed (Article 83 EPC), that the subject-matter of claim 1 was not novel in view of D2 (WO 2004/058961 A1) or D3 (WO 2005/056782 A2) and that it did not involve an inventive step vis-à-vis any of D2 or D4 (WO 2005/124012 A1), when also considering the teaching of D9 (WO 97/25402 A1).

Reasons for the Decision

1. Auxiliary request 6 - Added matter (Article 123(2) EPC)
 - 1.1 With respect to claim 1, the opponent has argued in essence that the features of this claim were individually mentioned in the patent application as filed but not in combination.
 - 1.1.1 It is apparent to the board that the skilled reader of the application as filed would necessarily determine the original disclosure provided therein by considering the application as a whole. In particular, he would consider the disclosure in original paragraph [5] wherein the invention was identified as *"methods and compositions for dynamic pH control particularly in detergent applications"* (see the first sentence in page 2, lines 8 to 10), and further specified as being *"compositions comprising a sufficient amount of at least one enzyme and at least one substrate for the enzyme, sufficient to drop the pH of a wash liquor to at least about pH 7 or less"* (page 2, lines 16 to 18) as well as *"methods for cleaning at least a portion of a surface and/or fabric comprising: the optional steps of washing and/or rinsing a surface and/or fabric; contacting the surface and/or fabric with at least one composition set forth herein and/or a wash liquor comprising at least one composition set forth herein; and optionally washing and/or rinsing the surface and/or fabric, wherein the contacting occurs during a wash cycle"* (page 4, lines 9-13).

The skilled reader also notes that original claim 1 is worded almost identically to the above cited passage at page 2, lines 16 to 18, of the description and,

similarly requires that the amount of enzyme and substrate must be sufficient "to drop the pH of the wash liquor" to a value of "7 or less" (emphasis added).

Hence, the skilled reader of original claim 18 (that recites: "A method for cleaning at least a portion of a surface and/or fabric comprising: the optional steps of washing and/or rinsing a surface and/or fabric; contacting said surface and/or fabric with the composition of Claim 1 and/or a wash liquor comprising the composition of Claim 1; and optionally washing and/or rinsing said surface and/or fabric, wherein said contacting occurs during a wash cycle" and, thus, corresponds to a combination of the passages of the original description cited above) can only reasonably conclude that this claim discloses - through its reference to (original) claim 1 - a method for cleaning at least a portion of a surface and/or fabric comprising:

contacting, during a wash cycle, the surface and/or fabric with a wash liquor

- whose initial pH must necessarily be above "7 or less" i.e. be alkaline, and
- which must comprise an amount of at least one enzyme and at least one substrate for said enzyme, sufficient to drop the pH of a wash liquor to "7 or less".

The board stresses that the alkaline pH of the initial wash liquor in the method of original claim 18, appears the sole technically and logically possible construction of the requirement (in original claim 1) that the amounts of enzyme and substrate must be sufficient to "drop" the pH of a wash liquor to "7 or less".

This conclusion is further supported in paragraph [69] of the application as filed (see in the first sentence "[t]he pH of the aqueous wash liquor during the start of the wash cycle is generally high, typically above 7..." emphasis added by the board).

1.1.2 The opponent's submissions directed at disputing the above construction are rejected for the following reasons:

- The allegation that original claim 18 would also allow for the alternative possibility that the contact between the surface to be cleaned and the composition of claim 1 could take place in the absence of a wash liquor, is not only in apparent contradiction to the fact that original claim 1 only recites "wash liquor", but also unrealistic, because for the skilled person it is self-evident that the presence of a sufficiently diluted aqueous fluid is not only required in most "washing cycles", but is all the more manifestly required in the method of original claim 18 in order for having any (measurable) "pH", as well as in view of the fact that the enzyme and its substrate must interact with each other to reduce the pH. Hence, the mention in original claim 18 of the possibility of contacting the substrate to be cleaned directly with the "composition" of (original) claim 1 can only plausibly refer to the use of such composition in undiluted neat form when, and only when, such composition can also act as "wash liquor", i.e. when the composition already *per se* is a sufficiently diluted aqueous liquid composition. Hence, it is apparent that in the method disclosed by claim 18 a "wash liquor" is always present.

- The opponent has also alleged that the pH drop required in original claim 18 (due to the reference to claim 1) would not necessarily imply that the initial pH of the wash liquor had to be alkaline. In other words, in its opinion, the initial pH of the wash liquor could as well be acidic, then temporarily become alkaline due to reactions occurring during the wash cycle, and only finally be dropped (to a pH of 7 or less) by the interaction of the enzyme with the substrate as required in claim 18. For the board, this argument amounts to a vague hypothetical allegation, deprived of any evidence or any detailed and convincing theoretical explanation (e.g. as to which reactions can be expected to take place during the washing with an acidic wash liquor to such an extent to produce a substantial increase of the pH, let aside as to the reason why the pH-raising effect of these reactions should initially and only temporarily prevail during the wash cycle, against the adverse pH-lowering effect resulting from the enzyme action on the substrate present in the same wash liquor).

1.1.3 The board considers it apparent that claim 1 under consideration is mostly based on the combination of the method described in original claim 18 (interpreted as indicated above) with three features of the original invention that are not only individually recited in original claims 5, 7 and 12 but also repeatedly addressed throughout the original description, and which relate to most preferred ingredients of the composition of original claim 1 (and, thus, also of the wash liquor used in the wash cycle of the method of original claim 18). These three features are:

- that the enzyme mandatorily comprised therein is a perhydrolase,
- that the enzyme substrate mandatorily comprised therein is an ester substrate, and
- the presence therein of H₂O₂ or of a source thereof.

In the board's view, the skilled reader of the application as filed would necessarily conclude that the preferred features of the composition of original claim 1 defined in original claims 5, 7 and 12 are not only also disclosed in the original description in very general terms (and thus freely combinable one with the other also within the broadest definition of method of original claim 18) but directly and unambiguously in combination in the original application. This is apparent when considering in particular:

- the manifest correspondence existing between the most general definitions relating to the invention in original [5] (in particular the first sentence reading: "*[t]he present invention provides methods and compositions for dynamic pH control, particularly in detergent applications*") and the teaching in original [172] reading "*[t]he perhydrolase substrates in the dynamic pH detergent formula were used to generate peracid and acid for bleaching and lowering the pH over the course of the wash cycle*" (relating to the conditions used in Example 3 for the "*Determination of Substrate and Its effect on Cleaning Performance*") and the similar teachings in [164] to the end of the original application (see in particular paragraphs [166] to [168] and [170] to [173] and Figures 2 to 5 therein, also in combination with the description of the beneficial effects of peracid depicted in Figure 1 and described in [163]);

- the explicit qualification of perhydrolases as enzymes that also have hydrolase activity and the indication that their substrates must in general be ester, recited in original paragraph [5] (see page 2, lines 19 and 20, reading "*[i]n some particularly preferred embodiments, the hydrolase comprises at least one enzyme having perhydrolase activity (e.g., perhydrolases, as set forth herein)*" in combination with the preceding lines 28 to 30, reading "*[i]n some alternative embodiments, the enzyme is selected from hydrolases and ...*"; as well as the sentence bridging pages 2 and 3, starting with "*[i]n some preferred embodiments, the substrate comprising an ester moiety is selected from...*"),
- the corresponding teaching in original paragraph [072] confirming that the action of perhydrolase on the (ester) substrate leads to the formation of peracids as well as possibly of acids (see in particular the passages in this paragraph reading: "*[a]s the optimal pH values of different actives in laundry detergents vary greatly, as do the pH-dependent performance on cleaning of soiled fabric, compositions are needed that can effectively work under a wide variety of pH conditions to clean soiled fabric. The perhydrolase enzyme of the present invention used in some embodiments of the present invention, finds use in the generation of peracid bleach and pH-lowering acids from ester substrates ... Hydrolase cleavage of esters generates acid, which reduces the pH, solubilizing fatty residues and improving the performance of laundry components with optimal activities at acidic pHs*"),
- the teaching in original paragraph [79] that further clearly points to the core of the

originally disclosed invention (see in particular the passages reading: "*As indicated above, key components to peracid production by enzymatic perhydrolysis are enzyme, ester substrate, and hydrogen peroxide. Hydrogen peroxide can be either added directly in batch, or generated continuously "in situ" ... The perhydrolase enzymes of the present invention find use in the same washing powder batch method as the H₂O₂ source. However, these enzymes also find use with any other suitable source of H₂O₂, including that generated by chemical, electro-chemical, and/or enzymatic means...*"), as well as

- the fact that all the detergent compositions of the invention exemplified in the original application (i.e. all those which contain enzymes) also contain at least one perhydrolase enzyme, one or more ester substrates for this enzyme and H₂O₂ or a source thereof.

All the above teaches to the skilled reader that the composition of original claim 1 (and thus also the embodiments of the method of original claim 18) in which the wash liquor comprises hydrogen peroxide or a source thereof as well as the required amounts of a perhydrolase and ester substrate thereof is the core of the originally disclosed invention.

The skilled reader of all the passages identified above can therefore only conclude that the originally disclosed invention is also essentially focused on a method of cleaning that includes a wash cycle wherein an initially alkaline wash liquor comprises in combination hydrogen peroxide (or a source thereof) and amounts of perhydrolase and ester substrate sufficient at (producing amounts of peracids and acids sufficient

at) rendering neutral or acidic the pH of the wash liquor during the wash cycle.

In view of the above it is hence apparent that the preferred features separately recited in original claims 5, 7 and 12, are also implicitly disclosed in the original application to preferably occur in combination with the method of original claim 18.

- 1.1.4 As to the last feature of claim 1 still to be considered, i.e. the requirement that the drop of the pH of the wash liquor must be *"to a pH of 6.5 or less for a period of at least two minutes"*, it is explicitly recited on page 4, lines 16 to 17, of the original application. The board notes that this passage is manifestly part of the same portion of original paragraph [005] that has been identified above as comprising - in page 4, lines 9 to 13 - the most general definitions relating to the method of the invention that corresponds to the subject-matter of original claim 18. Moreover, it is also of some relevance that in both diagrams of Figures 4A and 5A (reporting experimentally determined pH profiles over a wash cycle time of 12 minutes) the data considered in original paragraphs [176] and [178] as evidence of the advantage of the invention show a drop of pH below 6.5 well before the last two minutes of the wash cycle.

If only for these reasons, the board concludes that the drop of pH of the wash liquor caused by the perhydrolase and the substrate *"to a pH of 6.5 or less for a period of at least two minutes"* appears originally disclosed as a generally applicable feature of the invention and, thus, also implicitly disclosed as combinable with the other features that identify the very essence of the originally disclosed invention.

- 1.1.5 Accordingly the board concludes that claim 1 at stake does not result in subject-matter extending beyond the content of the application as filed and, thus, does not contravene Article 123(2) EPC.
- 1.2 With respect to claim 2 the opponent argued that the disclosure in original paragraph [72] (see the passages cited above and, in particular the last cited sentence) only linked the drop of pH (and thus also the benefits of such drop recited in present claim 2) to the "*hydrolase cleavage*" and not to the activity of perhydrolase. Thus this paragraph would not provide a basis for claim 2 under consideration.
- 1.2.1 The board stresses again that also the disclosure of the relevant passages in original paragraph [72] would be determined by the skilled person in the context of the whole original disclosure, including the above cited most general definitions of the invention given in the portions of paragraph [5] in pages 2 to 4 identified above, as well all in the context of the other teachings of the application as filed that have been identified above as describing the core of the originally disclosed invention, i.e. as relating to cleaning methods in which the acidic pH results from the production of acids (peracids and inevitably also acids) caused by the action of perhydrolases. Indeed these latter are explicitly described as a subclass of hydrolases and, thus, as enzymes which are always also able to produce some hydrolase activity (due to the inevitable presence of water in the wash liquor) onto the ester containing substrates. Correspondingly, the last sentence in original paragraph [72] reading "*[h]ydrolase cleavage of esters generates acid, which reduces the pH, solubilizing fatty residues and improving the performance of laundry components with*"

optimal activities at acidic pHs" (emphasis added by the board) refers to any "hydrolase cleavage", i.e. including those in which this cleavage is caused by the most preferred subclass of the "hydrolase" enzymes, i.e. by the perhydrolases (and, thus, by the generation of peracids as well as of acids).

1.2.2 It is finally stressed that the above construction of the last sentence in [72] is also consistent with the immediately preceding teaching in the same paragraph that "*[t]he perhydrolase enzyme of the present invention used in some embodiments of the present invention, finds use in the generation of peracid bleach and pH-lowering acids from ester substrates*", namely that the perhydrolase also produces "*pH-lowering acids*" (and not just peracids).

1.2.3 Accordingly, the board concludes that [72] provides a basis for claim 2 and, thus also this claim does not contravene Article 123(2) EPC.

2. Sufficiency of disclosure of the invention (Article 83 EPC)

2.1 The opponent considered the method of cleaning defined in claim 1 insufficiently disclosed essentially because the patent in suit would give no details as to how to determine "*sufficient*" amounts of perhydrolase and ester substrate required in claim 1. Hence, and considering that many other conditions of the cleaning method might influence the actual pH profile during the wash cycle, an undue amount of experimental work would be necessary before a skilled person was able to realise embodiments of the invention. In addition, the opponent submitted that this lack of details rendered it impossible to carry out the preferred embodiments of

the invention described in paragraphs [0083] and [0084] of the patent as granted, comprising in addition another enzyme (i.e. an oxidase) that simultaneously produced further pH-lowering acids (i.e. in addition to the peracids and acids produced by the perhydrolase).

- 2.2 The board stresses that the opponent failed to provide any experimental evidence or detailed theoretical reasoning rendering plausible that a skilled formulator of cleaning compositions must necessarily carry out an undue amount of experimental work before being able to realise embodiments of the invention.
- 2.3 The board also notes the extensive experimental section (pages 18-32) of the patent which includes a wash procedure in [0163] providing detailed information concerning how to carry out the method of the invention. In particular, paragraphs [0085]-[0089] provide guidance in connection with which combinations of perhydrolase and substrate achieve a drop of pH to less than 6.5.
- 2.4 Nor is it apparent to the board that a skilled person is likely to encounter particular difficulties in monitoring the pH profile of laundry or dish washing (by hand or machine) or any other technically plausible embodiments of the claimed method.
- 2.5 On the contrary, no apparent difficulty may be predicted for arriving at several embodiments of claim 1 starting from the invention examples and modifying them. In the alternative, a skilled person could also start from any conventional laundry or dish washing method known to generate a moderately alkaline wash liquor (and in particular from those which do not already comprise perhydrolase or any other enzymatic

systems that the patent identifies as apt at producing pH-lowering acids) and add therein the perhydrolase, its substrate and (if not already present) the H₂O₂ or the source thereof required in claim 1 (i.e. the three mandatory ingredients of the invention for which guidance is given by the patent description in [0085] to [0089] and the patent examples). In particular, these ingredients may in a first attempt be added in the wash liquor of such conventional laundry or dish-washing method in amounts that are more or less comparable to those used e.g. in the wash liquor invention examples (see e.g. [0183] or [0186]). If the subsequent monitoring of the pH profile in the wash liquor during this wash cycle does not show the pH drop required in claim 1, it may reasonably be expected that only few further attempts - in which the initial concentrations of perhydrolase, substrate and H₂O₂ are increased in comparison with the initial attempt(s) - would be sufficient to obtain the required pH drop and, thus, to arrive at embodiments of the claimed method.

- 2.6 Similarly, no undue amount of experimental work appears necessary for carrying out the oxidase-containing embodiments of the invention described in [0083] and [0084] of the patent.

As already indicated above, many embodiments of the claimed method may be realised by modifying the patent examples or by adding the ingredients recited in claim 1 to conventional methods of cleaning in which the wash liquor does not already comprise any other enzymatic systems producing pH-lowering acids. The simple further addition in any of these many embodiments of the claimed method of substantial amounts of e.g. an oxidase and its substrate (i.e. the enzymatic system specifically disclosed in [0083] of the patent) would

necessarily also result in more embodiments of the claimed method.

On the contrary, possible problems in carrying out the oxidase-embodiments of the invention disclosed in paragraphs [0083] and [0084] only appear theoretically predictable under very special circumstances (e.g. when attempting to completely replace - by means of glucose and e.g. a low-activity glucose oxidase - the whole H₂O₂ used in a previous embodiment of the invention, or when aiming at a pH drop to e.g. just below 6.5 for just about the last two minutes of the wash cycle). However, these predictable difficulties in realising a very limited portion of the scope of claim 1 under consideration cannot possibly be regarded as serious reasons for denying sufficiency of disclosure.

2.7 Thus, also this objection is found unconvincing and the subject-matter of claim 1, as well as those of the other claims 2 to 6 of this request (all describing preferred embodiments of claim 1), are found to comply with the requirements of Article 83 EPC.

3. Auxiliary request 6 - Novelty (Article 54 EPC)

3.1 It is undisputed that none of documents D2 or D3 explicitly discloses any cleaning method in which the pH of the wash liquor drops to a value of less than 6.5 during the wash cycle, let alone that such pH drop lasts for at least two minutes.

3.2 The opponent essentially based its novelty objection on the similarity - in terms of chemical composition between the used detergent compositions as well as in terms of some of the other washing conditions - between certain cleaning methods/tests and/or detergent

compositions described in document D2 (Example 6) and D3 (Examples 20 to 27) and those described in Example 5 of the patent in suit.

3.3 It is however immediately apparent that no direct and unambiguous disclosure of the pH drop required to take place in the method of claim 1 can be made plausible on the basis of the mere similarity (and not the identity in terms of all other explicitly disclosed relevant features) allegedly existing between the prior art examples and the invention examples. In particular, any of the existing differences e.g. in chemical composition (between the wash liquors described in the prior art and those exemplified in the patent) that can be predicted to possibly contrast the aimed pH drop during the wash cycle, deprives of plausibility the alleged implicit occurrence in the prior art examples of the pH drop required in claim 1. Examples of such differences are:

- the presence of substantial amounts of sodium hydroxide (see in Example 6 of D2, page 9, line 1; as well as in the tables of Example 20 or 24 of D3) not accompanied by any indication as to the pH of these detergent compositions, when compared with the compositions of Example 5 of the patent that either comprise no sodium hydroxide at all (see the compositions disclosed in [0195], [0198] to [0201] most of which are also explicitly stated to have a pH between 9 and 10) or are accompanied with the explicit indication that unspecified amounts of sodium hydroxide are (only) comprised therein to set their pH to values comprised between 8 and 10 (see [0189] to [0194], [0196] and [0197], and [0202] and [0203]),
- the larger amount of e.g. ester substrate present in the detergent compositions described in Example

5 of the patent (all containing substantial amounts of Triacetin as well as of C₁₂-C₁₃ E_{6.5} Acetate, see in [0189], [0191], [0195], [0196], [0199] and [0202]) in comparison with the amount of substrate present in any of the compositions of D3, inclusive of that of Example 20(II) of D3 qualified by the opponent as "almost identical" to those disclosed in Example 5 of the patent.

3.4 If only for these reasons the board concludes that the opponent's submissions are insufficient at rendering plausible that the cited prior art directly and unambiguously discloses the method of claim 1, which thus, as well as the subject-matter of the dependent claims 2 to 6 of this request, are found to comply with the requirements of Articles 52(1) and 54 EPC.

4. Auxiliary request 6 - inventive step (Article 56 EPC)

4.1 The patent in suit is directed at a method of cleaning surfaces or fabrics that provides improved cleaning/bleaching of stains (see the last two sentences in paragraph [0004] in combination with the passages in paragraphs [0174] and [0187] relating the cleaning performance of the invention examples allegedly apparent from Figures 2B, 2C, 5B or 5C to the respective pH profile reported in Figures 2A and 5A).

4.2 The opponent's line of argument is essentially that the cleaning method of claim 1 only represented an obvious alternative to the cleaning tests using perhydrolase disclosed in Example 1 of D4 and Example 6 of D2.

4.3 The board notes however the following undisputed facts:
- the cleaning test of Example 1 of D4 comprises measures to ensure that the pH remains alkaline

during the washing test (see the penultimate paragraph on page 90 of D4), and

- the description of the cleaning test of Example 6 of D2 only provides a generic definition of the used (liquid) laundry composition in which sodium hydroxide is described to constitute from 2 to 4% by weight of the whole detergent composition (see page 94, line 1 of D2) and thus it appears plausible that also during such cleaning test the pH might have remained alkaline.

Hence, the subject-matter of claim 1 differs from each of the these two prior art cleaning tests at least in that the former requires that the amounts of perhydrolase and substrate (and thus the extent of enzymatic activity taking place during the wash cycle) must be sufficient for (producing amounts of peracid and acid molecules sufficient at) reducing "*the pH of the wash liquor to a pH of less than 6.5 for a period of at least two minutes*".

4.3.1 Further it is undisputed that none of D2 or D4 explicitly mention or necessarily imply even the possibility that the amounts of a hydrolase or of a perhydrolase and of a corresponding substrate in an alkaline wash liquor might render acidic this latter at some stage of the wash cycle.

4.3.2 Nor is such possibility apparent in view of the teaching in D9 (referred to by the opponent) that in a bleaching (or disinfecting) method the pH should (after a few minutes) advantageously be "*adjusted to be more acid either by the chemistry of the reaction or possibly by a delayed release or post dosing of an acidulant*" (see the second paragraph in page 5 of D9). Indeed, this teaching not only does not explicitly

refer to any generation of acids by means of enzymatic reactions, but cannot imply such reactions, since D9 does not even mention enzymes.

- 4.3.3 In view of the above, the board finds it immediately apparent that neither D2, nor D4, nor D9 suggest the possibility that sufficient amounts of a perhydrolase (or other hydrolases) and of a corresponding substrate might render acidic an initially alkaline wash liquor.
- 4.3.4 Therefore, the board also finds convincing the proprietor's line of argument that:
- (a) even if one assumes in favour of the opponent that the technical problem actually solved by the subject-matter of claim 1 over any of these two cleaning tests of the prior art was simply the provision of a further satisfactory method of cleaning, i.e. simply the provision of an alternative to the prior art;
 - (b) still the prior art referred to contains no teaching that could render obvious the modification of the prior art necessary to arrive at the claimed cleaning method (i.e. the setting of the amounts of perhydrolase and substrate so as to enable the required drop of pH during the wash cycle).
- 4.3.5 Under these circumstances, it is unnecessary to come to a conclusion as to whether the cleaning tests of Example 1 of D4 or Example 6 of D2 were indeed equally suitable as a starting point for the assessment of inventive step and/or as to whether the technical problem actually solved vis-à-vis these prior art tests was indeed the simple provision of an alternative method of cleaning (as argued by the opponent) or a more ambitious technical problem (as argued by the proprietor).

4.4 If only for these reasons the board concludes that the opponent's submissions are insufficient at rendering plausible that the method of claim 1 is obvious in view of the cited prior art.

Thus, the subject-matter of this claim, as well as that of the dependent claims 2 to 6 of this request, are all found to comply with the requirements of Articles 52(1) and 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in the version of claims 1-6 of Auxiliary Request 6 filed with letter of 18 December 2019 and a description to be adapted thereto.

The Registrar:

The Chairman:



A. Pinna

J.-M. Schwaller

Decision electronically authenticated