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D E C I S I O N
of 27 June 2003

Case Number: T 0835/99 - 3.3.6

Application Number: 91311050.8

Publication Number: 0488750

IPC: C11D 1/62

Language of the proceedings: EN

Title of invention:

Process and composition for treating fabrics

Patentee:

UNILEVER PLC, et al

Opponent:

PROCTER & GAMBLE EUROPEAN TECHNICAL CENTER N.V.

Headword:

Quenching agent/UNILEVER

Relevant legal provisions:

EPC Art. 123(2), 54, 56

Keyword:

"Amendments extending beyond content of application as filed
(main and auxiliary request): no"

"Novelty (main and auxiliary request): yes"

"Inventive step (main and auxiliary request): no - alternative
application of the quenching agent obvious to try for the
skilled person"

Decisions cited:

-

Catchword:

-



Case Number: T 0835/99 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 27 June 2003

Appellants: UNILEVER PLC
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and

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Respondent: PROCTER & GAMBLE EUROPEAN TECHNICAL CENTER
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Representative: TER MEER STEINMEISTER & PARTNER GbR
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
25 June 1999 concerning maintenance of European
patent No. 0488750 in amended form.

Composition of the Board:

Chairman: P. Krasa
Members: L. Li Voti
M. B. Tardo-Dino

Summary of Facts and Submissions

I. The present appeal is from the interlocutory decision of the Opposition Division concerning the maintenance in amended form of European patent No. 0 488 750, concerning a process and a composition for treating fabrics.

II. A notice of opposition was filed against the patent, wherein the Respondent (Opponent), sought revocation of the patent on the grounds of Article 100(a), because of lack of novelty and inventive step of the claimed subject-matter, and of Article 100(c) EPC.

The following documents were cited *inter alia* during the opposition proceedings:

(1): Technical Information "Quencher OB Liquid" by Sandoz (1988);

(11): CA-A-1137381;

(12): EP-A-0000406;

(13): EP-A-0345842.

III. The Opposition Division found that claim 1 according to the main request did not comply with the requirements of Article 123(2) EPC and the subject-matter of some claims according to the first and second auxiliary requests were not novel in the light of the teaching of document (1).

The subject-matter of the claims according to the third auxiliary request was found instead to be novel and inventive over the cited prior art and to comply therefore with the requirements of the EPC.

IV. An appeal was filed against this decision by the Patent Proprietors (hereinafter referred to as the Appellants).

During the oral proceedings, held before the Board on 27 June 2003, the Appellants filed two new sets of amended claims to be considered, respectively, as the main and the auxiliary request.

The independent claims 1, 4 and 9 according to the main request read, respectively, as follows:

"1. A process for the treatment of a fabric to restore original colour and/or prevent changes in hue caused by fluorescent agents, the process comprising the step of treating the fabric with a composition comprising:
(i) a quenching agent capable of reducing or preventing re-emission of light by a fluorescent agent by a process of complexation; and
(ii) a nonionic detergent active, being condensation products of aliphatic (C8-C18) primary or secondary linear or branched alcohols with ethylene oxide, up to 40 EO;
the process being characterised in that it is carried out as a part of a domestic laundering process, as part of a wash step.";

"4. A process for the treatment of a fabric to restore original colour and/or prevent changes in hue caused by fluorescent agents, the process comprising the step of treating the fabric with a composition comprising:
(i) water insoluble fabric softener and;
(ii) a quenching agent capable of reducing or preventing re-emission of light by a fluorescent agent by a process of complexation;
the process being characterised in that it is carried out as a part of a fabric laundering process, as part of a rinse step.";

"9. Use of a textile treatment composition in the wash step of a domestic laundering process to restore original colour and/or prevent changes in hue caused by fluorescent agents, characterised in that the composition comprises:
(i) a nonionic detergent active, being condensation products of aliphatic (C8-C18) primary or secondary linear or branched alcohols with ethylene oxide, up to 40 EO;
(ii) a quenching agent capable of reducing or preventing re-emission of light by a fluorescent agent by a process of complexation."

This set of claims contains dependent claims 2 and 3 and 5 to 8, which refer to specific embodiments of the processes of claims 1 and/or 4.

The auxiliary request, consisting of 5 claims, comprises an independent claim 1, which is identical to claim 9 of the main request with the exception of the wording "textile treatment composition", which is replaced by "fabric treatment composition".

Dependent claims 2 to 5 of this request refer to particular embodiments of the claimed use.

V. The Appellants put forward in writing and during the oral proceedings that

- the use of the specific class of nonionic detergent actives of the claims in combination with a quenching agent in the wash step of a domestic laundering process and the use of a water insoluble fabric softener in combination with a quenching agent in the rinse step of a laundering process find both support in the original documents of the application from which the patent in suit was granted;
- the treatment disclosed in document (1) concerns the aftertreatment of a fabric after dyeing and not a laundering process, which involves the removal of soil from a fabric after its use; the claimed subject-matter is thus novel over document (1);
- documents (11) to (13) do not disclose the use of a quenching agent as claimed in the patent in suit;
- as regards inventive step, document (1) does not teach or suggest that the disclosed quenching agent could be used successfully for preventing changes in hue caused by the fluorescent agents present in the wash or in the rinse step of a laundering process or for restoring the colour of

fabrics damaged by the fluorescent agents during such a laundering process.

VI. The Respondent submitted *inter alia* the following arguments:

- claim 1 according to both the main and the auxiliary requests contravene the requirements of Article 123(2) EPC insofar, as they relate to the use of a specific class of nonionic surfactants in combination with a quenching agent in the wash step of a domestic laundering process; moreover, claim 4 of the main request contravenes the requirements of Article 123(2) EPC insofar, as it relates to the use of a water-insoluble fabric softener in combination with a quenching agent in the rinse step of a laundering process;
- document (1) discloses the use of a quenching agent in a laundering process in combination with a nonionic surfactant or its use in a finishing liquor in combination with non-ionic or cationic softeners for the after-treatment of dyed woven and knit goods. This last treatment implies its use as part of a rinse step of a fabric laundering process. Claims 1 and 4 of the main request and claim 1 of the auxiliary request lack thus novelty;
- documents (11), (12) and (13) disclose fabric detergent compositions and rinse compositions comprising cationic compounds and fluorescent agents and their use in fabric laundering processes. Since such cationic compounds were known to form complexes with the fluorescent

agents and thus to act as quenching agents, these disclosures were also detrimental to the novelty of the claims of the patent in suit;

- as regards inventive step, document (1) already suggested to use a quenching agent in the presence of fabric detergent actives for preventing changes in hue caused by fluorescent agents or for restoring the colour of textile damaged by the use of fluorescent agents and there was no prejudice against the use of the quenching agent during the wash step of a laundering process. Moreover, document (1) suggested to treat damaged fabrics with a finishing liquor containing a quenching agent in combination with a non-ionic or cationic softeners; it was thus obvious to apply the quenching agent together with a water-insoluble softener during the rinse step of a laundering process. The claimed subject-matter lacked therefore inventive step.

VII. The Appellants request that the decision of the first instance be set aside and the patent be maintained on the basis of any of the main or the auxiliary requests, both filed during oral proceedings.

The Respondent requests that the appeal be dismissed.

VIII. At the end of the oral proceedings, the chairman announced the decision of the Board.

Reasons for the decision

1. *Main request*

1.1 Article 123 EPC

1.1.1 The wording of claims 1 and 9 according to the main request finds support on page 4, lines 8 to 14 and 23 to 31 in combination with page 3, lines 25 to 30 and page 6, lines 29 to 32 of the original application as filed.

In particular, nonionic surfactants are already indicated to be the preferred detergent active to be used in combination with the quenching agent on page 4, line 14. The specific class of nonionic surfactants indicated in the claims is mentioned on page 6, lines 29 to 32 as being one of those suitable for the described invention. Therefore, the application as filed contains support for the use of such a nonionic class in combination with all other features of the process as claimed.

1.1.2 As to claim 4 of the main request, this embodiment, relating to the use in the rinse of a laundering process, finds support on page 4, lines 16 to 32; page 6, lines 1 to 5 and page 10, lines 8 to 11 of the application as filed.

Since the passage on page 4, lines 31 and 32 specifies that the described process can be carried out as part of the rinse step and page 6 specifies that the composition comprising the quenching agent can comprise

ingredients normally associated with rinse conditioners, for example fabric softening materials (page 10, lines 4 to 6), the embodiment described on page 4, lines 16 to 21 relates also to a composition which can be used in the rinse step of a laundering process.

1.1.3 The Board is thus satisfied that the amended claims comply with the requirements of Article 123(2) EPC.

1.2 Novelty

1.2.1 The claims of the patent in suit require that the original colour of the treated fabric is restored and/or changes in hue are prevented. Since hue is a characteristic of dyed and not of white fabric, the Board concludes that the claims concern the treatment of dyed and not of white fabric. White fabric can be, however, present in the process together with dyed fabrics as shown, for example, in example 4 of the patent in suit.

1.2.2 Documents (11) to (13) fail to indicate if the disclosed washing or rinsing processes are also applied to dyed fabric. Therefore the Board concludes that they cannot be considered already on this ground as anticipating the claimed subject-matter.

1.2.3 Document (1) discloses the use of a quenching agent capable of reducing or preventing re-emission of light by a fluorescent agent by a process of complexation for preventing changes of hue in a dyed fabric washed with a composition containing fluorescent agents or for restoring the colour of dyed fabrics damaged by

fluorescent agents (see cover page and page 3, point 2). The quenching agent is, however, used according to this document either in a preliminary treatment of the fabric before washing (see page 3, point 3.1, line 6) and thus not in the wash step of a domestic laundering process as required by claims 1 and 9 of the patent in suit or in the treatment of a damaged fabric by the exhaust or pad method (see page 5, point 3.2, lines 1 to 3), which cannot be considered to be comparable to the wash or rinse step of a laundering process.

In fact, even though the exhaust method involves the immersion of the fabric in a bath containing the treatment composition, which comprises, for example, a nonionic surfactant (see page 6, point 4.2), this step does not involve necessarily the removal of soil, accomplished in a laundering process by rinsing with water, in the absence of which step the soil would redeposit onto the fabric.

The Board thus concludes that the claimed subject-matter is novel over the cited prior art.

1.3 Inventive step

1.3.1 Technical problem

The patent in suit, and in particular the subject-matter of claims 1 and 9 of the main request, relates to the treatment of fabric during the wash step of a laundering process for restoring the original colour and or preventing change in hue caused by the absorption onto the fabric of fluorescent agents (see page 2, lines 3 and 4 and page 3, line 4).

As explained in the patent in suit, the fluorescent agents are absorbed onto dyed fabrics by washing the fabrics with a detergent composition comprising the fluorescent agent or by washing such fabrics together with other fabrics, which already have some fluorescent agents absorbed onto them (page 2, lines 14 to 17).

Since fluorescent agents absorb invisible ultraviolet light and re-emit blue or green visible light, this effect brings about an undesirable change in hue on coloured fabrics (page 2, lines 9 to 11).

The technical problem underlying the claimed invention is therefore indicated in the patent in suit as the provision of a process for treating fabrics, which restores their original colour and/or prevent changes in hue brought about by the fluorescent agents absorption on the fabrics (page 2, lines 35 to 36).

Document (1) deals with the technical problem of preventing such a change in hue or of restoring the original colour of dyed fabrics damaged by the absorption of fluorescent agents (see 1.2.3 above). The Board considers thus this document as the most suitable starting point for the evaluation of inventive step, as also suggested by both parties.

As already explained above, the process of document (1) differs from that of claim 1 and from the corresponding use of claim 9 insofar, as the fabric is sized with the quenching agent before washing or is treated by the exhaust method and the class of the used nonionic surfactant is not specified.

Since document (1) already provided a solution to the technical problem dealt with in the patent in suit, the technical problem underlying the patent in suit must be defined in more simpler terms as the application of the quenching agent for the same purpose in an alternative process.

The Board is satisfied that the above technical problem has been solved by the patent in suit by applying the quenching agent in combination with a specific class of nonionic surfactants during the wash step of a domestic laundering process or in combination with a water-insoluble fabric softener during the rinse step of a laundering process.

1.3.2 Evaluation of inventive step

As already explained above, document (1) already teaches that the original colour of a fabric damaged by the absorption of fluorescent agents can be restored by applying the quenching agent by the exhaustion method, e.g. in a bath containing the quenching agent and Sandozin, which is a nonionic surfactant (see page 5, point 3.2 and page 6, point 4.2).

In the Board's judgement the skilled person would have concluded from this teaching that the desired effect could be achieved by applying the quenching agent to the fabrics from any aqueous bath containing a nonionic surfactant. Therefore, it was obvious for the skilled person to try the application of the quenching agent also from a laundry bath obtained during a domestic laundry operation with a laundry detergent composition,

e.g. one based on nonionic surfactants. There was in fact no prejudice in the prior art for using such quenching agents in combination with other compatible surfactants or components of a detergent composition.

Moreover, it was also obvious for the skilled person to use any known nonionic detergent surfactant currently used in a laundry detergent composition and therefore also the class of nonionic surfactants of the claims of the patent in suit, which belongs to the currently most used ones in laundry detergent compositions, as submitted by the Respondent during oral proceedings and not disputed by the Appellants.

The Board concludes, therefore, that it was obvious for the skilled person to try to use the quenching agent in accordance with the features of claims 1 and 9 of the main request.

Since the subject-matter of claims 1 and 9 does not meet the requirements of Article 56 EPC there is no need to deal with the objections raised by the Respondent against independent claim 4.

2. *Auxiliary request*

2.1 Article 123(2), novelty and inventive step

Since claim 1 of this request is identical to claim 9 of the main request with the exception of the wording "textile treatment composition", which is replaced by "fabric treatment composition", the conclusions of points 1.1.3, 1.2.2, 1.2.3 and 1.3.2 above apply *mutatis mutandis* to this request.

Therefore, the Board concludes that the subject-matter of claim 1 lacks inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P. Krasa