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D E C I S I O N
of 25 August 2005

Case Number: T 1058/03 - 3.3.06

Application Number: 96927357.2

Publication Number: 846159

IPC: C11D 17/06

Language of the proceedings: EN

Title of invention:

Process for making high density detergent composition using conditioned air

Patentee:

The Procter & Gamble Company

Opponent:

Unilever PLC

Headword:

Water/PROCTER & GAMBLE

Relevant legal provisions:

EPC Art. 123(3)

Keyword:

-

Decisions cited:

G 0001/93

Catchword:

-



Case Number: T 1058/03 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 25 August 2005

Appellant:
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
5 August 2003 concerning maintenance of the
European patent No. 846159 in amended form.

Composition of the Board:

Chairman: P. Krasa
Members: G. Raths
U. Tronser

Summary of Facts and Submissions

I. This appeal is from the interlocutory decision of the Opposition Division concerning maintenance in amended form of European patent No. 0 846 159 relating to a process for making high density detergent composition using conditioned air.

II. Claim 1 of the patent as granted read:

"1. A process for preparing a high density detergent composition characterized by the steps of:

(a) agglomerating an aqueous surfactant paste and dry detergent material in a mixer/densifier so as to form detergent agglomerates having a density of at least 650 g/l; and

(b) inputting air into said mixer/densifier while agglomerating said aqueous surfactant paste and said dry detergent material, wherein said air has a relative humidity below the equilibrium relative humidity of said detergent agglomerates such that at least 0,01 to 10% of water, by weight of the total amount of water contained in the paste, from said surfactant paste is absorbed by said air."

III. The decision of the Opposition Division was based on a set of seven claims of auxiliary request 1, Claim 1 reading as follows:

"1. A process for preparing a high density detergent composition characterized by the steps of:

(a) agglomerating starting components consisting of an aqueous surfactant paste and dry detergent material in

a mixer/densifier so as to form detergent agglomerates having a density of at least 650 g/l; and
(b) inputting air into said mixer/densifier while agglomerating said aqueous surfactant paste and said dry detergent material, wherein said air has a relative humidity below the equilibrium relative humidity of said detergent agglomerates such that 0,01 to 10% of water, by weight of the total amount of water contained in the mixture of all the starting components, from said surfactant paste is absorbed by said air."

- IV. A notice of opposition had been filed against the granted patent, wherein the Opponent had sought revocation of the patent on the grounds of Article 100(a) EPC for lack of novelty and inventive step (Articles 52(1), 54(2) and 56 EPC) and of Article 100(b) EPC for lack of sufficiency of disclosure (Article 83 EPC).

In its letter dated 22 May 2003 the opponent submitted a new ground of opposition; it argued that Claim 1 contravened Article 123(2) EPC because the passage "0,01 to 10% by weight of the total amount of water contained in the mixture of all starting components" (Claim 1, application as filed, page 3, lines 17 to 19; patent in suit, page 3, lines 28 to 29) resulted in an amendment that the patent contained subject-matter extending beyond the content of the application as filed.

- V. In its decision the Opposition Division held that the requirements of Articles 54, 56, 83 and 123 EPC were met.

In particular, the Opposition Division further held that the requirements of Article 123(3) EPC were met since the starting material consists of dry detergent material and an aqueous surfactant paste. The dry material may comprise hydrated water, i.e. bonded water; however, such water would not be removed during the agglomeration since the processing temperature was relatively low (0 to 60°C) and the residence time (2 to 45 seconds) was quite short (patent in suit, page 4, line 38).

VI. This decision was appealed by the opponent (appellant) who argued that the patent had been amended in a way as to extend the scope of protection (Article 123(3) EPC).

According to the appellant there was a change of the weight basis for water. The appellant did not accept that by moving the basis from the "paste" (in Claim 1 as granted) to "mixture of all the starting components" (in Claim 1 of auxiliary request 1 on which the decision of the Opposition Division was based) the basis would not have changed, the only materials present being the dry detergent material and the aqueous surfactant paste, of which only the paste was the water containing material.

The appellant argued as follows:

If the basis had changed from "paste" to "mixture of the starting components" there was a breach of either the upper or lower limits of the numerical range i.e. 0.01 wt.-% and 10 wt.-%.

Either the low level was measurable, then there would be a violation of Article 123(3) EPC or it was not measurable then the requirements of Article 100(b) EPC would not be fulfilled.

Further, even if all the available moisture were in the paste, the change of basis would extend the scope of protection (Article 123(3) EPC).

The appellant submitted two hypothetical cases in support of its arguments. The calculations made by the appellant were done for the purpose of being evidence of the change and of extension of protection.

- VII. The proprietor (respondent) argued in its letter dated 13 April 2004, to which was annexed an auxiliary request, that the appeal was limited to the objection raised under Article 123(3) EPC and, if at all, to the objection raised under Article 100(b) EPC detailed reasons having not been given in respect of the alleged difficulties to measure the lower level of moisture.

The "dry" material would have been as described as absorbing water from the paste (patent in suit, page 5, lines 4 to 6). The dry detergent material would therefore not contribute any moisture to the air.

The calculations made by the appellant would be erroneous.

It would be unrealistic that there was a problem under Article 123(3) EPC regarding the lower limit of 0,01 wt.-%.

The appellant would not have shown that there was any liberation of water of crystallization when considering zeolite apart from the aqueous paste as starting material during the process.

- VIII. In its letter dated 16 August 2005, the respondent discussed the kinds of water which may be bound, e.g. (a) water of hydration in zeolites and water molecules held chemically in sodium carbonate monohydrate, (b) water molecules absorbed in particles, (c) freely available water molecules in atmosphere.
- IX. During the oral proceedings before the Board held on 25 August 2005, the respondent withdrew its auxiliary request submitted under cover of the letter dated 13 April 2004.
- X. The appellant requested that the decision under appeal be set aside and the European patent No.0 846 159 be revoked.

The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. *Framework of the appeal proceedings*
- 1.1 The appellant had stated in the grounds of appeal under cover of the letter dated 1 December 2003 that
- "the decision is appealed on the basis that the opposition division were incorrect to uphold the patent in opposition proceedings because the patent has been

amended in such a way as to extend the scope of protection and thus is in breach of Article 123 (3) EPC. In addition the invention may be insufficiently disclosed in the sense of Article 83 EPC."

- 1.2 As regards Article 100(a) EPC, no case had been made by the appellant. In other words, the appellant did not contest the correctness of the decision of the Opposition Division in this respect.

The objection raised under Article 100(b) EPC concerned only the measurement of the lower level of water to be absorbed by air from the surfactant paste, namely "0,01 wt.-%." However no further reasons had been submitted, therefore this objection is considered by the Board as a passing remark.

Since the patent is revoked for other reasons, it is not necessary to deal in detail with this objection.

- 1.3 Therefore, in this case, the only issue to be dealt with in these proceedings is Article 123(3) EPC.

2. *Article 123(3) EPC*

- 2.1 Article 123(3) EPC is directly aimed at protecting the interests of third parties by prohibiting any broadening of the claims of a granted patent, even if there should be a basis for such broadening in the application as filed (G 1/93, OJ EPO 1993, 125, reasons no. 9, second sentence).

When considering Article 123(3) EPC the question of extension of protection requires a comparison of the claims as amended during the opposition procedure with the claims as granted.

- 2.2 As a first step the Board has to determine the extent of protection which was conferred by the patent **before** the amendment in terms of category and technical features.

In this case, Claim 1 as granted was a process claim and the category of this claim has not changed. The only amendments to be examined concern technical features, in particular the starting materials involved in the process.

- 2.2.1 Before the amendment, the critical passage in Claim 1 read:

"at least 0,01 to 10% of water, by weight of the total amount of water contained in the paste, from said surfactant paste is absorbed by said air."

The 100% basis was

"by weight of the total amount of water contained in the paste."

The Board does not find it necessary to deal with the different interpretations regarding the meaning of "at least 0,01 to 10% of water" since the feature relating to the 100% basis of water is sufficient to decide on the issue under Article 123(3) EPC.

2.2.2 There was agreement between the parties that the 100% basis (**before** amendment) according to Claim 1 was the paste; in other words, the total amount of water contained in the paste was the only water available for being absorbed by air having a relative humidity below the equilibrium relative humidity of the detergent agglomerates.

As a passing remark, the Board notes that the "total amount" of water contained in the paste is identical to "the amount" of water contained in the paste, since the paste is the only source of available water.

2.3 Then, the extent of protection is determined which is conferred **after** the amendment of Claim 1.

After the amendment, the critical passage reads:

"0,01 to 10% of water by weight of the total amount of water contained in the mixture of all the starting components, from said surfactant paste is absorbed by said air."

The 100% basis is

"by weight of the total amount of water contained in the mixture of all the starting components."

The air passing over the paste and the dry detergent material is now capable to absorb between 0,01 and 10 % of water by weight of the total amount of water contained in the mixture of all the starting components i.e. from the aqueous surfactant paste and the dry

detergent material, the starting components being defined in Claim 1:

"starting components consisting of an aqueous surfactant paste and dry detergent material".

2.4 According to the respondent the dry detergent material does not contain water available for absorption by air. In its letter dated 16 August 2005, the respondent identified three "classes of water":

1. the first class would be water chemically bound by a zeolite; it can only be absorbed if the temperature is high enough;
2. the second class would be physically absorbed water which will not be driven off if the overall conditions would favour adsorption rather than desorption;
3. the third class would be water freely available in the atmosphere prevailing in the granulator.

It further argued that a skilled person familiar with this kind of process would have a realistic approach of interpreting Claim 1. It would be relevant to note that absorption time for air is only from 2 to 45 seconds or with a second stage from 0,5 up to 15 minutes at temperatures of up to 60°C at a relative humidity up to 95% with the process according to the example being run at conditions of 10 seconds at 32°C and at a relative humidity of 50% to make primary agglomerates having an equilibrium relative humidity of 100% (patent in suit,

page 4, lines 37 to 39, lines 55 to 58; page 8, lines 56 to 58).

- 2.5 For the Board, the patent in suit does not contain an explicit technical definition of "dry"; "dry" does not mean free of water; it is true that elimination of water from zeolite requires a high energy input. However the wording of Claim 1 allows any temperatures so also temperatures being so high as to allow removal of water from a zeolite. It goes without saying that Claim 1 allows for other energy inputs lower than that necessary for eliminating water of crystallisation in a zeolite. Further, Claim 1 allows any absorption time for air passing over the starting components.

Therefore the dry detergent material is a further source of water which is available for being absorbed by air having a relative humidity below the equilibrium relative humidity of the detergent agglomerates.

Whereas Claim 1 allowed, **before** amendment to absorb water available in the **paste**, Claim 1, **after** amendment allows to absorb water available from **the paste and the dry detergent material**, whereby "dry" does not mean - as said above - "free of water".

- 2.6 The Board has also noted the appellant's calculation regarding the meaning of Claim 1 before the amendment.
- 2.6.1 According to table 1 of the appellant's letter of 1 December 2003, if the air flow absorbs 1 g water from a paste consisting of 32 g dry material and 8 g water (total weight 40 g), then the final paste consists of

32 g dry material and 7 g water (total weight 39 g); 12,5% of water have been absorbed by air.

Before the amendment of Claim 1 this amount would be **outside** the claimed range (of 0,01 to 10 %).

2.6.2 The Board has also noted the calculation made by the appellant in respect of the meaning of Claim 1 **after** the amendment.

According to table 2 of the appellant's letter of 1 December 2003, if the air flow absorbs 1 g water from a paste consisting of 32 g dry material and 8 g water (total weight 40 g) and **no** water from a zeolite consisting of 48 g dry material and 12 g water (total amount 60 g), then the final product consists of the paste consisting of 32 g dry material and 7 g water (total weight 39 g) and a zeolite consisting of 48 g dry material and 12 g water (total amount 60 g); in that case 5% of water have been absorbed by air.

After the amendment of Claim 1 this amount of 5% would be inside the claimed range (of 0,01 to 10%).

In both cases, the amount of water of 1 g has not changed; however, the relative amount has dropped from 12,5% (**before** amendment) to 5% (**after** amendment); whereas 12,5% **before** amendment was outside the claim, the wording **after** amendment allows to have the same amount (1 g of water) calculated on a different basis (mixture of all the starting components, i.e. 5%) inside the claim.

In this hypothetical case, the amendment involves an extension of protection since the protection conferred by the patent **before** the amendment excluded 12,5% (falling outside the range 0,01-10% of water by weight of the total amount of water contained in the **paste**) whereas, **after** amendment, the protection conferred by the patent covers 5% of water by weight of the total amount of water contained in the **mixture of all the starting components**, thus falling inside the range of 0,01-10% of water by weight of the total amount of water contained in the mixture of all the starting components.

- 2.7 The European patent has been amended in such a way as to extend the protection conferred and, therefore, does not meet the requirements of Article 123(3) EPC.

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:

G. Rauh

P. Krasa