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D E C I S I O N
of 11 October 2004

Case Number: T 0913/01 - 3.3.6

Application Number: 95931175.4

Publication Number: 0777719

IPC: C11D 11/00

Language of the proceedings: EN

Title of invention:

Production of anionic surfactant granules

Patentee:

UNILEVER PLC, et al

Opponent:

VRV S.p.A.

Headword:

Drying process/UNILEVER

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Prior use (information available to the public: yes)"
"Inventive step (main and auxiliary request: no)"

Decisions cited:

T 0830/90, T 0799/91, T 0782/92, T 0037/98

Catchword:

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Case Number: T 0913/01 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 11 October 2004

Appellants:
(Proprietors of the patent)

UNILEVER PLC
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and

UNILEVER N.V.
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Representative:

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Respondent:
(Opponent)

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Representative:

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 11 June 2001
revoking European patent No. 0777719 pursuant
to Article 102(1) EPC.**

Composition of the Board:

Chairman: P. Krasa
Members: G. N. C. Raths
A. Pignatelli
G. Dischinger-Höppler
J. H. Van Moer

Summary of Facts and Submissions

- I. This appeal is from the decision of the Opposition Division to revoke the European patent No. 777 719 relating to the production of anionic surfactant granules.
- II. Claim 1 of the patent as granted read:
- "1. A process for the production of detergent particles comprising at least 75% by weight of an anionic surfactant and no more than 10% by weight of water which comprises feeding a paste material comprising water in an amount of more than 10% by weight of the paste and the surfactant into a drying zone, heating the paste material to a temperature in excess of 130°C in the said drying zone to reduce the water content to not more than 10% by weight and subsequently actively cooling the material in a cooling zone to form detergent particles wherein at least 80% of the particles have a particle size of 180 to 1500 µm and less than 10% have a particles size less than 180 µm."
- III. An opposition based on the grounds of Article 100(a) and (b) (lack of novelty, lack of inventive step and lack of sufficiency of disclosure; Articles 54(1),(2), 56 and 83 EPC) was filed.

The proprietors submitted, inter alia, the following document

- (3) Letter from Unilever Research Port Sunlight Laboratory to VRV S.p.a (hereinafter VRV) dated 22 October 1990 relating to "Test samples of

detergents to determine the feasibility of processing our materials on your equipment".

Inter alia, the following document was submitted as evidence of prior public use advanced by the opponent:

(C8) Drying trials - Final table. A test report dated 19 October 1993 and summarizing the conditions for drying samples supplied by Enichem, VRV being the author and Enichem the addressee.

In the opposition proceedings, two of the witnesses named by the opponent were questioned on 28 March 2001 during the taking of evidence at the oral proceedings before the Opposition Division.

These statements were recorded as testimonies attached to the contested decision.

During the opposition proceedings the proprietors requested the maintenance of the patent in suit in amended form on the basis of a new set of claims. Amended Claim 1 thereof differed from Claim 1 as granted by the addition of "and the detergent particles have a bulk density in excess of 550 g/l" at the end of the latter.

IV. In its decision the Opposition Division held that the subject-matter of the then pending claims was sufficiently disclosed for it to be carried out by a skilled person and was also novel, but did not involve an inventive step in view of the prior use "Enichem" as evidenced by document (C8) as the closest prior art since it was obvious for the skilled person to adapt

the prior art process so as to obtain the granular detergent product having a bulk density and particle size distribution as set out in claim 1.

- V. An appeal was filed against this decision by the proprietors (hereinafter appellants).
- VI. By its letter dated 16 September 2004 the opponent (respondent) withdrew its opposition.
- VII. During the oral proceedings before the Board held on 11 October 2004 the appellants filed a new main request and a new auxiliary request, the latter under the heading "First auxiliary request", which requests replaced all prior requests of the appellants.

Claim 1 of the main request differed from Claim 1 as granted in that "in excess of 130°C" was replaced by "in excess of 140°C and not in excess of 170°C" and at the end of the claim the following passage was added "and the detergent particles have a bulk density in excess of 550 g/l the process further comprising agitating the paste with agitation means which have a tip speed in excess of 15 ms⁻¹".

Claim 1 of the auxiliary request differed from Claim 1 of the main request in that the passage "comprising primary alkyl sulphate" was added between "surfactant" and "and no more than 10% by weight".

VIII. The appellants submitted in essence the following arguments:

Rules of confidentiality governed the tests reported in document (C8) conducted by the respondent i.e. VRV, supplier of VRV flash driers, and, therefore, no information relating to the drying process features of the tests was made available to the public.

A prerequisite of public prior use was that a member of the public, i.e. any third party, gets knowledge of the concerned subject-matter. This condition was not fulfilled in the present case, neither the respondent, donor of the information nor Enichem, recipient of the information, meeting the requirements of a third party being a member of the public (see T 799/91, Reasons point 4.1, paragraph 1).

Apart from confidential disclosure considerations, the skilled person was not taught that the process disclosed by document (C8) could be used to produce a detergent powder having the desired bulk density and the desired particle size distribution.

The subject-matter was inventive even in view of the prior use "Enichem" according to document (C8) since there was no hint in the prior art concerning the criticality of the drying temperature in order to obtain non dusting detergent granules having high bulk density (Article 56 EPC).

IX. The appellants requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or the auxiliary request both submitted during the oral proceedings.

Reasons for the Decision

1. *Main request*

1.1 Claim 1

Claim 1 is directed to a process comprising four process features, the other features concerning the end product.

The process features comprise

- (i) feeding a paste material comprising water in an amount of more than 10% by weight of the paste and an anionic surfactant into a drying zone;
- (ii) agitating the material with agitating means having a tip speed in excess of 15 ms^{-1} ;
- (iii) heating the material to a temperature in excess of 140°C and not in excess of 170°C to reduce the water content to no more than 10% by weight;
- (iv) subsequently actively cooling material in the cooling zone.

The end product comprises detergent particles comprising at least 75% by weight of an anionic surfactant and no more than 10% by weight of water wherein at least 80% of the particles have a particle size of 180 to 1500 μm and less than 10% have a particle size of less than 180 μm and the detergent particles have a bulk density in excess of 550 g/l.

The appellants confirmed that the process features lead to the desired product characteristics.

1.2 Article 123(2) EPC

Claim 1 differs from Claim 1 as filed (and as granted) in that "in excess of 130°C" was replaced by "in excess of 140°C and not in excess of 170°C" and at the end of the claim the following passage was added "and the detergent particles have a bulk density in excess of 550 g/l the process further comprising agitating the paste with agitation means which have a tip speed in excess of 15 ms^{-1} ".

The support for said amendments is found in the application as filed (page 4, lines 28 and 29 and page 16, lines 30 to 32) as well as in Claim 2 of the application as filed.

The Board is satisfied that Claim 1 meets the requirements of Article 123(2) EPC.

1.3 Prior use

1.3.1 If a product or a process disclosed by public prior use is to be regarded as part of the state of the art, it has to be substantiated and proved what was made available to the public and under what circumstances, i.e. how, where and by whom? (See Case Law of the Boards of appeal of the European Patent Office, 4th edition, 2001, VII.C.8.6).

1.3.2 In the present case, both parties agreed on the fact that VRV, the respondent, received samples from Enichem for running tests in order to verify whether it would be possible to dry them in the VRV flash drier.

It was not contested that document (C8) is a test report dated 19 October 1993 and summarizing the conditions for drying samples supplied by Enichem, VRV being the author and Enichem the addressee. The test dates relating to the trial identified as "128N" are reported to be 15 to 18 October 1993.

The following process details are listed for this particular testing procedure:
tip speeds of 10, 12.5, 20.1 and 29.3 m/s,
hot jacket temperatures of 105, 117, 121, 140 and 174.8°C, and cool jacket temperatures of 17, 18 and 19.2 °C.

The water content of the product is reported to amount to 1.7 to 2.1 weight%.

Further it was agreed that all this information was made available by VRV i.e. the respondent to Enichem before the priority date of the patent in suit which is 26 August 1994.

- 1.3.3 Thus the questions of what was made available, when, where and by whom are not in dispute. Concerning how the information i.e. the drying tests requested by Enichem was communicated, the appellants by reference to T 799/91 (not published in the OJ EPO) argued that in the stage of establishing the drying conditions for the process, the cooperating parties, in this case the respondent (i.e. VRV) and Enichem, had to observe rules of confidentiality which restrict a free transfer of knowledge to the public, both parties not being each a member of the public.

In order to confirm their arguments the appellants had submitted document (3). This document is a letter dated 12 October 1990 sent by the appellants to the respondent relating to test samples of detergents sent by the appellants to the respondent to determine the drying feasibility of these samples in the respondent's flash driers. It contains an agreement that the appellants' materials should be treated confidentially by the respondent.

- 1.3.4 The Board does not agree for the following reasons:

- (a) The confidentiality clause in document (3) does not concern the process features, but the materials the appellants offered VRV for testing.

This demonstrates that if confidentiality was a matter of concern for the appellants, they would have insisted in signing a confidentiality contract with the respondent regarding the process data.

- (b) The appellants did not offer any evidence e.g. by nominating a witness from VRV declaring that drying data should be treated confidentially. Asked by the Opposition Division whether the contract between the respondent and Enichem contained a confidentiality clause, the witness, Mr Zarbo, who was made aware of his obligation to give evidence truthfully and whose attention was drawn to Rule 72(3) EPC, said he could not remember (Minutes of the taking of evidence, 28 March 2001, page 3, paragraph 2). Therefore, no evidence is available that an explicit secrecy agreement existed between VRV and Enichem.
- (c) The question is therefore whether there was an implicit secrecy agreement between the respondent and Enichem.
- (d) The existence of an implicit secrecy agreement depends on the commercial interrelationship and interests of the companies involved which are the decisive point at issue in the present case (see also T 830/90 (OJ EPO 1994, 713), T 782/92, T 37/98).

Therefore, the respective interests of the parties have to be taken into due consideration.

- (e) In T 799/91 the manufacture of the claimed subject-matter, a specific part of a lock, had been "sub-contracted out" to a third party. The decision of the opponent to place an order for the manufacture of said part was deemed to be based on a relationship of trust, which justified the assumption of an implicit secrecy agreement between the opponent (respondent) and the manufacturer.

In the present case the circumstances were different. Enichem did not look for a sub-contractor manufacturing a test piece but for information on the operating conditions of a drier constructed and sold by VRV, the respondent.

- (f) In contrast to the situation in T 799/91, for the Board there is no doubt that the respondent, in order to be able to praise its drier to potential customers, had an interest to disclose process features showing how the drier works.

Therefore, there is no reason to expect confidentiality from the respondent. Actually, the expectation not to disclose process parameters would be an unrealistic assumption, the respondent being interested to commercialize its driers. One sales argument was to tell potential customers about the success in drying different products with the VRV drier. Therefore, it could not be expected from the respondent, donor of the information, to keep usual process conditions such as the heating and cooling temperature and the tip speed secret.

- (g) In this case the nature of the information has to be taken into consideration.

Document (C8) does not disclose a unique drying process of one particular detergent material (the specification of which could have been covered by a secrecy agreement) but is a summary of drying conditions.

- (h) It follows from all the considerations regarding the circumstances of this case that the business contacts did not presuppose an implicit secrecy agreement and that the respondent as a member of the public was free to disclose suitable process data to any potential customer such as Enichem.

1.3.5 For all these reasons the Board considers that document (C8) had been made available to the public and belonged to the state of the art according to Article 54(2) EPC.

1.4 Novelty

Claim 1 is directed to a process comprising, *inter alia*, the step of heating to a temperature in excess of 140°C and not in excess of 170°C.

The Board is satisfied that the subject-matter of Claim 1 is novel since temperatures in excess of 140°C and up to 170°C were not disclosed by document (C8).

1.5 Inventive step

1.5.1 The problem set out in the patent in suit consists in the provision of a process for the production of detergent particles having a high bulk density, a high level of anionic surfactant and excellent powder properties (page 2, lines 32 to 36), like reduced dusting, improved dissolution, and reduced segregation, when postdosing (page 3, lines 40, 42, 45 and 46).

1.5.2 The appellants argued that in the light of what was made available to the public by the respondent (see 1.3.2 above) the problem underlying the patent in suit was to adapt the process disclosed in document (C8) in order to provide detergent particles having a high bulk density in excess of 550 g/l and a particle size distribution as defined in Claim 1.

In the course of the oral proceedings before the Board, the appellants stated that they have tried to rework the process disclosed in document (C8) and found that the desired product properties were not obtained, but eventually conceded that no evidence was on file to support this statement. Therefore, the technical problem to be solved in view of document (C8) cannot be based on product properties, but boils down to the provision of an alternative process which is credibly solved by applying a different temperature in the heating step.

1.5.3 It remains to be decided whether or not the claimed solution involves an inventive step.

1.5.4 Document (C8) disclosed hot jacket temperatures of 105, 117, 121, 140 and 174.8°C, all other process features being identical with those of Claim 1, respectively.

To a person skilled in the art, adjusting the temperature in function of the composition to be dried has to be regarded as a routine experimentation.

No evidence has been submitted that a specific effect was caused by heating the compositions concerned to temperatures in excess of 140°C up to 170°C.

Therefore, the heating range defined for the claimed process is arbitrary and cannot render the latter inventive.

It follows that the subject-matter of Claim 1 does not involve an inventive step.

1.5.5 The main request is not allowable.

2. Auxiliary request

2.1 Claim 1

Claim 1 differs from Claim 1 of the main request in that "comprising primary alkyl sulphate" was added between "surfactant" and "and no more than 10% by weight".

2.2 Article 123(2) EPC

The passage "comprising primary alkyl sulphate" finds its support in Claim 3 of the application as filed.

The Board is satisfied that Claim 1 meets the requirements of Article 123(2) EPC.

2.3 Novelty

The Board is satisfied that the subject-matter of Claim 1 is novel, no temperatures lying between 140°C and 170°C having been disclosed in document (C8).

2.4 Inventive step

2.4.1 The problem underlying the patent in suit in the light of document (C8) is the same as outlined under point 1.5.2.

2.4.2 The Board accepts that this problem is solved since the aqueous paste according to example 1 of the patent in suit comprises sodium cocoPAS (PAS being the abbreviation for primary alkyl sulphate).

2.4.3 It remains to be decided whether or not the claimed solution involves an inventive step.

"Test Sample 128N" comprised "primary alcohol sulphate C₁₂C₁₅ Na salt (PAS)" (document (C8), left column). Since the detergent particles according to the patent in suit comprising primary alkyl sulphate caused no unexpected technical effect, the subject-matter of Claim 1 does not involve an inventive step.

Claim 1 does not meet the requirements of Article 56 EPC.

The auxiliary request is not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:

G. Rauh

P. Krasa