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D E C I S I O N
of 26 October 2005

Case Number: T 0013/04 - 3.3.06

Application Number: 94107220.9

Publication Number: 0623670

IPC: C11D 3/37

Language of the proceedings: EN

Title of invention:

Aqueous based surfactant compositions

Patentee:

Huntsman International LLC

Opponent:

Cognis Deutschland GmbH & Co. KG

Headword:

Spherulitic detergent/HUNTSMAN

Relevant legal provisions:

EPC Art. 123(2), 54, 56, 83

Keyword:

"Inventive step (yes): superior property of the claimed composition vis-à-vis the prior art stated in the granted patent - no convincing arguments to the contrary"

Decisions cited:

-

Catchword:

-



Case Number: T 0013/04 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 26 October 2005

Appellant: HUNTSMAN INTERNATIONAL LLC
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 6 November 2003
revoking European patent No. 0623670 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: G. Rath
Members: P. Ammendola
J. Van Moer

Summary of Facts and Submissions

- I. This appeal is from the decision of the Opposition Division to revoke the European patent No. 0 623 670 relating to aqueous based surfactant compositions, in particular to a spherulitic, structured surfactant composition (hereinafter "SSSC").
- II. Claim 1 of the patent as granted read:
- "1. A spherulitic, structured surfactant composition comprising water, a surfactant and a surfactant-desolubiliser in a relative proportion adapted to form a flocculated system in the absence of deflocculant and a deflocculant comprising a hydrophobic part and a hydrophilic part, in an amount sufficient to inhibit the flocculation of the system characterised in that said deflocculant consists of 0.01 to 5% by weight, based on the weight of the composition, of at least one compound of the general formula RXA where R is a C_{5-25} alkyl, alkaryl or alkenyl group, X represents O , S , NR^1 , PO_4R^1 or PO_3R^1 where R^1 is hydrogen or a C_{1-4} alkyl group and A is a polymeric hydrophilic group comprising more than four monomer units linked at one end to X , A being sufficiently hydrophilic for said compound to form micellar solutions in an aqueous solution of said surfactant-desolubiliser at a concentration of the later, relative to water, equal to that in the composition."*
- III. The Opponent had sought revocation of the patent in suit on the grounds of lack of novelty and inventive step (Article 100(a) in combination with Articles 52(1), 54 and 56 EPC) as well as for insufficient disclosure

(Article 100(b) EPC) and for added subject-matter (Article 100(c) EPC). It had cited, *inter alia*, the following documents

- (1) WO-A-91/09107,
- (2) EP-B-0 346 995,
- (3) WO-A-91/09108,
- (4) WO-A-91/06622,
- (5) WO-A-91/08281,
- (6) WO-A-91/09102

and

- (7) WO-A-91/08280.

During the opposition proceedings the Patent Proprietor had filed *inter alia* document

- (12) affidavit of Richard Clapperton

containing also experimental comparative data and statements as to the knowledge of the person skilled in the art in the field of SSSCs.

IV. The Patent Proprietor had requested the Opposition Division to maintain the patent in amended form on the basis of the claims 1 to 20 and the description filed under cover of the letter dated 25 September 2002

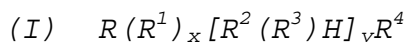
(hereinafter respectively indicated as "amended claims" and "amended patent description").

Amended claim 1 differed from claim 1 as granted (see above point II) only in that the following passage was added at the end of the claim:

", and said deflocculant comprises:

(A) a polyelectrolyte of the formula $RX[CZ_2CZ_2]_nH$ where R and X have the same significance, at least one Z represents a carboxylate group CO_2M , where M is hydrogen or a metal or base such that the polymer is water-soluble, any other Z being hydrogen or a C_{1-4} alkyl and n is 5 to 50; and/or

(B) a polycarboxylated polyalkoxylate of the general formula



in which R is a straight or branched chain alkyl, alkaryl or alkenyl group or straight or branched chain alkyl or alkenyl carboxyl group, having in each case, from 6 to 25 carbon atoms, each R^1 is an OCH_2CH_2 , each R^2 is an OC_2H_3 , each R^3 is a $C(R^5)_2C(R^5)_2$ group, wherein from 1 to 4 R^5 groups per R^3 group are CO_2A groups stet, each other R^5 group being a C_1-C_2 alkyl, hydroxyl alkyl or carboxyalkyl group or, preferably H, R^4 is OH, SO_4B , SO_3B , OR, sulphoxysuccinyl, OCH_2CO_2B , or R^6NR^7 , R^6 is a C_1-C_4 alkyl or hydroxyalkyl group, R^7 is C_1-C_{20} alkyl group, a benzyl group a CH_2CO_2B , or $\rightarrow O$ group or PO_4B_2 , B is a cation capable of forming water soluble salts of said carboxylic acid, such as an alkali metal or

alkaline earth metal, y is at least 1 and (x+y) has an average value of from 5 to 30, wherein the R¹ and R² groups may be arranged randomly or in any order along the polyalkoxylate chain; and/or

(C) an alkyl polyglycoside containing a significant proportion with more than four units; and/or

(D) a polysulphonate."

The amended claims 2 to 19 defined preferred embodiments of the SSSC of amended claim 1, while amended claim 20 was directed to the use of the deflocculant specified in amended claim 1 to inhibit flocculation in a SSSC comprising water, a surfactant and a surfactant-desolubiliser in a relative proportion adapted to form a flocculated system in the absence of deflocculant.

- V. The Opposition Division found that the amended patent contained no added subject-matter and that the Opponent's objection in this respect would not make sense since it implied an interpretation of the expression "*said deflocculant consists of*" in the amended claim 1 and patent description different from its literal meaning.

It also found that the subject-matter of amended claim 1 was sufficiently disclosed since the skilled person would be familiar with SSSCs and the amended patent description would also make reference (see page 5, lines 10 to 58) to the information contained in several prior art publications.

The Opposition Division considered additionally that the subject-matter of amended claim 1 would not be anticipated by the detergent compositions disclosed in prior art documents. In particular, the general formulae given in document (2) would be Markush formulae, possibly encompassing but not directly disclosing the deflocculant ingredient defined in amended claim 1.

However, the Opposition Division also found that the subject-matter of amended claim 1 represented an obvious selection within the more generic disclosure provided by formula IV of document (2). In particular, the Patent Proprietor had not shown that the claimed SSSCs containing a polysulphonate as deflocculant encompassed by this general formula of document (2) provided an unexpected technical effect.

- VI. The Patent Proprietor (hereinafter Appellant) lodged an appeal against this decision requesting, *inter alia*, reimbursement of the appeal fee because of a serious procedural violation allegedly made by the Opposition Division.
- VII. With a communication sent with the summons to oral proceedings to be held on 26 October 2005, the parties were informed of the preliminary opinion of the Board that no such procedural violation seemed evident from the content of the decision.
- VIII. With the letter of 26 September 2005 the Appellant informed the Board that it would not attend oral proceedings and filed five sets of claims as first to fifth auxiliary requests. It also requested the

possibility to carry out an adaptation of the description in case the Board would find allowable any of its requests and filed *inter alia* an annex A representing the structural formula of the polymer type A11 mentioned in Table 2a of document (2) in order to show that the subject-matter of claim 1 of the main request would not cover polymers encompassed by this formula.

IX. The Appellant argued in writing substantially as follows:

The Opposition Division had committed a serious procedural violation in that it ignored the experimental comparative data described in document (12) without giving any reason in this respect in the decision under appeal.

The findings of the Opposition Division in respect of the Respondent's objections of added subject-matter and insufficient disclosure were correct.

In respect of the issue of novelty, the Opposition Division had also correctly concluded that none of the general formulae in document (2) disclosed the deflocculants (A) to (D) as defined in amended claim 1. The same applied to the general formula A11 of document (2), relied upon by the Respondent in these appeal proceedings.

However, the Opposition Division had erred in interpreting these prior art general formulae as possibly encompassing polymers wherein each macromolecule comprised a single hydrocarbon radical

(hereinafter "HR") side-chain. Moreover, while the definition of the deflocculants (A) to (D) in amended claim 1 would require for these ingredients the linear architecture typical of telomers (hereinafter labelled as "ETE orientation" in accordance with the original expression "*end to end orientation*" at page 10, lines 43 to 44 of the amended patent description), document (2) did not even contain an indirect reference to telomerization processes and/or to their products. Nor could the general formulae in document (2) be interpreted in isolation as disclosing the precise position of the side-chain(s) along the polymer backbone. Hence, the overall disclosure in document (2) rendered available to the skilled reader only those polymers according to these general formulae which were also obtainable by the sole synthetic method disclosed in document (2), i.e. the random copolymerization of mixtures of monomers including monomers carrying an HR side-chain. Therefore, the Opposition Division had erred in concluding that the disclosure in this citation, actually limited to polymers wherein a plurality of HR side-chains were randomly distributed along the polymer backbone, would also have encompassed polymers wherein most macromolecules carried a single HR side-chain in an ETE orientation with regard to the hydrophilic polymer part.

This error in the interpretation of the formulae of document (2) would also have led the Opposition Division to the erroneous denial of inventive step, based on the wrong assumption that the claimed SSSCs could represent a selection within the more generic disclosure provided by formula IV of document (2). Moreover, the Opposition Division erred in disregarding

the superior deflocculation achieved in the SSSCs of the invention vis-à-vis those of the prior art disclosed in document (2), as demonstrated by the experimental data contained in document (12), notwithstanding the fact that the Respondent had provided no evidence supporting its allegation to the contrary.

- X. The Respondent refuted the Appellant's reasoning by arguing in writing and orally substantially as follows.

The amended patent contained added subject-matter because the patent application as filed did not disclose that only 0.01 to 5% by weight of the deflocculant should be constituted by the ingredient(s) of formula RXA.

The amended patent description did not disclose how to produce the required spherulitic structure of the claimed SSSC, nor would common general knowledge concerning the other conventional SSSCs be sufficient for carrying out the invention over the whole claimed range. In particular, this would be apparent considering that no rule for predicting the occurrence of the desired spherulitic structure was derivable from the prior art.

The subject-matter of amended claim 1 would be anticipated by the SSSC of example 1 of document (1), wherein the deflocculant used was the polymer of formula A11 disclosed in document (2). This latter defined a polymer with ETE orientation of the hydrophobic HR and of the hydrophilic polymer part according to the deflocculant definition in amended

claim 1. At the oral proceedings before the Board, the Respondent conceded that a correct representation of the general formula A11 was given in the Annex A filed under cover of the Appellant's letter of 26 September 2005 and that the general copolymer formulae would normally provide no information as to the monomer unit distribution along the polymer chain.

The Respondent argued further that, even if the Board would have concluded that in the specific deflocculants directly and unambiguously disclosed in document (2) the HR side-chain would necessarily be randomly distributed along the polymer backbone, the ETE arrangement would still be at least present in some of the macromolecules forming the deflocculants represented by the general formulae of document (2), in particular formulae I and IV. Hence, the Opposition Division had correctly concluded that the claimed SSSCs represented only an arbitrary selection within this prior art and were rendered obvious by the combination of document (2) with the disclosure of the other ingredients of SSSCs provided by document (1) or any of documents (3) to (7), or even simply by the common general knowledge of the skilled person.

The comparative experimental data in document (12) were unsuitable for demonstrating the alleged improved deflocculation property of the claimed SSSCs because they did not compare the claimed SSSCs with those having the closest structural proximity of the prior art.

At the oral proceedings before the Board, the Respondent conceded to have no evidence that the

- deflocculation achieved in the claimed SSSCs would be equal to or worse than that obtainable by those of the prior art, but maintained that the similarity between the deflocculants defined in amended claim 1 and those disclosed in document (2) would render implausible any improved deflocculation property of the claimed SSSCs.
- XI. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the set of twenty claims considered by the Opposition Division (main request) or, alternatively, on the basis of any of the sets of amended claims of the first to fifth auxiliary requests filed under cover of the letter of 29 September 2005.
It also requested reimbursement of the appeal fee.
- XII. The Respondent requested that the appeal be dismissed.
- XIII. At the end of the oral proceedings, held as scheduled, in the absence of the Appellant as announced, the Chairman announced the decision of the Board.

Reasons for the decision

Main request

1. *Added subject-matter (Articles 100(c) and 123(2) EPC)*
 - 1.1 The Respondent's reasoning for maintaining that the amended patent does not comply with the requirements of Article 123(2) EPC (see above point X) is substantially the same for which it had opposed the patent as granted

under the provisions of Article 100(c) EPC. In its opinion the wording

"...characterised in that said deflocculant consists of 0.01 to 5% by weight, based on the weight of the composition, of at least one compound of the general formula RXA..."

which is present in granted claim 1 (see above point II) as well as in amended claim 1 (see above point IV) and in the corresponding descriptions (see page 7, lines 49 to 50 of the granted and of the amended patent description), extends the subject-matter of the patent.

The Respondent has interpreted the above-cited wording as if it required that "*0.01 to 5% by weight*" **of the deflocculant** should "*consist of*" the ingredient(s) of formula "RXA".

Accordingly, the Respondent has concluded that no basis for such definition was to be found in the patent application as filed.

- 1.2 To assess if the presence in amended claim 1 of the above-identified wording results in the addition of previously undisclosed matter requires to interpret it in the context of the whole disclosure of the patent as amended, in particular since this wording *per se* manifestly lacks self-consistency and, thus, clarity.

As a matter of fact even the Respondent's interpretation of this wording seems contradictory with at least one part of it, i.e. the explicit requirement

that the "0.01 to 5% by weight" range must be "**based on the weight of the composition**" (emphasis added by the Board).

The Board notes instead that the above-cited wording is partially similar to that used in two distinct paragraphs of the amended patent description at page 9, lines 30 to 31, and page 11, lines 3 to 4. Hence, the Board concludes that for the skilled reader of the amended patent the above-cited expression can only amount to a confusingly worded attempt to describe in a single sentence the same **two** characteristics of the deflocculant ingredient also disclosed in the just-cited distinct paragraphs, i.e.

- that the deflocculant **constitutes** 0,01 to 5% by weight of the composition and
- that the deflocculant **consists of** compound(s) of formula RXA.

Instead, the interpretation suggested by the Respondent, besides being contradictory with part of the above-cited wording, is also contradicted by these two paragraphs of the amended patent description and, thus, is not persuasive.

- 1.3 Since these two characteristics were already clearly disclosed in the application as filed (see page 27, lines 17 to 19, and page 32, lines 7 to 16), the Board concludes that the above-cited unclear wording does not extend the subject-matter of the amended patent beyond that of the application as filed.

Accordingly, the Board finds that the subject-matter of claim 1 as amended and the corresponding part in the patent description complies with the requirements of Article 123(2) EPC.

2. *Sufficiency of disclosure (Articles 83 and 100(b) EPC)*

2.1 The Respondent has argued that the patent in suit does not disclose how to arrive at the required "spherulitic" structure of the claimed SSSCs. It has referred in particular to the fact (see also example 3 of the patent) that this structure is not always present at all ingredient amounts encompassed by the definition of amended claim 1. The Respondent has also stressed that the abundant prior art referred to in the amended patent description would only confirm the impossibility of predicting whether or not a novel composition may display a spherulitic structure. Hence, the skilled person could obtain the claimed SSSCs different from those specifically disclosed in the patent examples only after extensive trial and error experimentation.

2.2 Although the Appellant has not contested that the "spherulitic" structure is not necessarily present for all ingredient amounts encompassed in the definition given in amended claim 1, it has nevertheless maintained (see points 26 and 27 of document (12)) that the optimization of the ingredients and their concentrations would only require some routine work of the skilled detergent formulator.

2.3 The Board notes that the Respondent has provided neither experimental evidence of the alleged difficulties encountered by the skilled person in preparing further embodiments of the claimed SSSC, nor evidence as to the existence of common general knowledge which would justify the expectation of such difficulties.

The only argument mentioned by the Respondent in order to render plausible its objection is the undisputed absence in the prior art of any recognisable rule for predicting the occurrence of the spherulitic structure.

However, according to the Appellant's statement at points 26 and 27 of document (12) (see above point 2.2) the skilled person does not need such a rule for rapidly arriving at the claimed SSSCs different from those disclosed in the patent examples.

2.4 Hence, the Respondent's arguments are not supported and have been contested by statements to the contrary by the other party and, thus, must be disregarded as unproven allegations.

Accordingly, the Board finds that the patent as amended complies with requirements of Article 83 EPC.

3. *Novelty (Article 100(a) in combination with Articles 52(1) and 54 EPC)*

3.1 Amended claim 1

3.1.1 Amended claim 1 (see above point IV) defines a SSSC comprising in addition to water, a surfactant and a

surfactant-desolubiliser also one or more of the deflocculants (A) to (D). These latter have a specific structure, i.e. the ETE orientation, since the hydrophobic HR portion is always (indirectly) bound to the end (monomeric unit) of a polymeric hydrophilic group (see in amended claim 1 in particular the passage "... *linked at one end to ...*", emphasis added by the Board).

3.1.2 The Respondent has contested the novelty of the claimed subject-matter only in respect of the SSSC of example 1 of document (1) which comprises (see in document (1) the footnotes to the compositional table of example 1) a deflocculating agent "*according to formula A11*" of document (2).

3.1.3 The Board notes that in the formula of Annex A (see above point VIII), which provides undisputedly a correct representation of the formula A11, the HR is bound to an acrylic polymer via a carboxylate group. Instead, in the deflocculants defined in amended claim 1 no carboxylate bridging group may be present in the alternative (A), and in the other alternatives (B) to (D) the polymer chain is not a polyacrylate.

Therefore, already for this reason alone, the prior art relied upon by the Respondent cannot possibly anticipate the deflocculants (A) to (D) as defined in present claim 1.

3.1.4 The Board considers it appropriate to discuss further the interpretation of the general polymer formulae of document (2).

The Board notes that, as convincingly argued by the Respondent, the formula A11 correctly depicted in the above-identified Annex A is a general polymer formula disclosing directly and unambiguously also polymers containing **a single hydrophobic HR side-chain**, because the indices "z" and "n" in this formula are disclosed to indicate "1" and "at least 1", respectively (see document (2), page 7, lines 41 to 42).

However, while in the deflocculant defined in amended claim 1 most polymeric molecules carry the single hydrophobic HR side-chain always in the ETE orientation typically obtainable by telomerization, this mandatory ETE orientation is not directly and unambiguously disclosed to the skilled reader of the formula A11 *per se* or of any other general polymer formula of document (2) in isolation. This is due to the well-known fact, conceded even by the Respondent at the oral proceedings before the Board, that a general polymer formula may - at least in principle - be used for describing only the average content of monomer units of a copolymer, regardless of their actual distribution along the polymer chain (distribution which could be, e.g., random, in blocks or intermediate between these two extremes).

Therefore, the Board concurs with the Appellant that the nature of the polymer disclosed by the general formulae of document (2), and thus also by the general formula A11, can only be established taking into account the whole disclosure of this citation, and finds, in view of the whole content of document (2) and, in particular, the information as to the only method disclosed therein for producing the polymeric

deflocculant (see document (2), page 25), that the polymers actually disclosed in this citation are mixtures of macromolecules wherein the majority thereof carries one or more HR side-chain(s) **randomly** distributed along the polymer backbone (i.e. indifferently bound to inner or end units).

The Board concludes, therefore, that document (2) discloses by means of the general formula A11 only polymers which, although formed mostly by macromolecules carrying a single hydrophobic HR, differ (additionally) from the deflocculants with ETE orientation defined in amended claim 1 in that in the polymers according to formula A11 the HR is **not** selectively bound to the end monomer unit of the hydrophilic polymer (as in the deflocculants defined in amended claim 1), but rather randomly distributed along the polymer backbone.

- 3.1.5 The Respondent has argued instead that document (2) would also implicitly disclose deflocculants with ETE orientation. In the opinion of the Respondent this orientation would be suggested to the skilled reader of the general formulae of document (2) by the fact that the telomerization is a conventional technique and by the fact that document (2) itself implicitly suggests (see document (2) page 7, lines 41 to 42) that the distribution of the HR side-chains may be different from random. Therefore, the skilled reader of these general formulae would necessarily associate them also to the corresponding two- or three-block copolymers, wherein for $n = 1$ only one HR pendant is present and is located at the macromolecule end, i.e. necessarily with an ETE orientation.

The Board notes however that document (2) is silent on telomerization processes and/or their products and does not specify any other kind of copolymer structure apart from random. In particular in respect of this last point, the Board wishes to stress that the general formulae of document (2) may - at least in principle - be used to describe, beside the random copolymers or the two- or three-block copolymers, also other polymer structures such as, for instance, those intermediate between these extremes. Thus, in the absence of any further information, the simple statement in document (2) that the monomer units do not need to be necessarily in random order does **not** necessarily imply that the copolymers depicted in these formulae must be two- or three-block copolymers (and thus necessarily display an ETE orientation), since the same statement would also apply in case its writer intended to describe other kinds of copolymer structure.

Hence, the Board finds that document (2) does not provide any explicit or implicit disclosure **unambiguously** referring to a possible ETE orientation of the HR side-chain and the polymeric backbone, in the deflocculants according to the general formulae in this citation. Accordingly, the only reasonable interpretation of these general formulae is that described above at point 3.1.4.

3.1.6 For all the above reasons the Board concludes that the subject-matter of amended claim 1 is novel over the prior art.

3.2 Amended claims 2 to 20

Amended claims 2 to 19 refer to preferred embodiments of the detergent composition of amended claim 1 on which they depend and, hence, the Board finds that their subject-matter is novel for the same reasons indicated above for amended claim 1. The same reasoning applies to the use defined in amended claim 20 of the deflocculant defined in amended claim 1 for deflocculating SSSCs.

3.3 Therefore, the Board concludes that the main request of the Respondent complies with the requirements of Article 54 EPC.

4. *Inventive step (Article 100(a) in combination with Articles 52(1) and 56 EPC)*

4.1 Amended claim 1

4.1.1 The Board notes that the deflocculants for detergent compositions disclosed in document (2) are explicitly mentioned in the amended patent description as relevant background art (see in particular page 5, lines 50 to 58, in combination with page 10, lines 43 to 52). Therefore, the Board concurs with the Respondent that the deflocculants for detergent compositions of this prior art, and in particular those according to general formulae I and IV wherein a single hydrophobic HR side-chain is randomly distributed along the polymer backbone (see above point 3.1.4) represent a reasonable starting point for the assessment of inventive step.

The deflocculants to be used in the claimed SSSCs differ from those disclosed in the general formulae of document (2) mainly in that the former display an ETE orientation (see above point 3.1.4).

4.1.2 The Board notes that the amended patent description (see the just-mentioned parts thereof) states explicitly that these deflocculants with ETE orientation achieve **superior deflocculation** vis-à-vis those of document (2).

4.1.3 The Opposition Division did not indicate any argument or evidence against this superior deflocculation as presumable from the just identified statement in the patent description. Nevertheless, it argued in the decision under appeal on the basis that the Appellant carried the burden of rendering credible the achievement of this technical advantage vis-à-vis the structurally closest compositions undisputedly disclosed in document (2).

The Board notes instead that, according to the established jurisprudence of the Boards of Appeal it is the Opponent who carries the initial burden of proof of the facts against patentability in the opposition and the consequent appeal proceedings (see e.g. the Case Law of the Boards of Appeal of the EPO, 4th edition, VI.J.6.1, page 360, fifth paragraph).

Therefore, also in the present case the burden of proof that the technical advantage stated in the granted patent had actually not been achieved by the patented invention rests with the Respondent in the appeal

proceedings too, as it did not provide any evidence supporting this allegation in the preceding opposition.

4.1.4 The Board notes that the Respondent has presented the following arguments which could possibly have a bearing on the credibility of the above-identified statement in the granted patent (see point 4.1.2) as to the superior deflocculation property of the claimed SSSCs vis-à-vis the prior art:

(a) the claimed SSSCs would represent a specific selection within the more generic disclosure in document (2),

(b) no available evidence would demonstrate the superior properties of the deflocculants defined in amended claim 1 vis-à-vis those of this prior art having the closest structural relationship to those of the invention, and

(c) the structural similarity between the deflocculants described in amended claim 1 and those disclosed in document (2) with one HR side-chain randomly distributed along the polymer backbone would be remarkable.

4.1.5 The Board notes however also that, taking into account the correct interpretation of the disclosure of document (2) (see above point 3.1.4), the deflocculants defined in amended claim 1 cannot possibly represent a selection within the group of polymers disclosed by the general formulae in this citation (because of their different distributions of the HR side-chains).

Moreover, even if the alleged facts that the claimed SSSCs represented a selection within the prior art and/or that no evidence might be available for credibly demonstrating superior deflocculation vis-à-vis the prior art were true, these facts would **not** necessarily imply that the deflocculation achieved in the claimed SSSCs is more likely to be worse than or equal to (and not better than) that produced by the deflocculants of the prior art.

Therefore, the Board concludes that the arguments "(a)" and "(b)" relied upon by the Respondent (see above point 4.1.4) do not affect the credibility of the superior deflocculation achieved in the claimed SSSCs.

The other Respondent's argument relevant in this respect (i.e. "(c)" at point 4.1.4 above) amounts implicitly to assuming that the structural similarity between the deflocculants described in amended claim 1 and those found to be disclosed in document (2), is **so remarkable that** no appreciable difference in the resulting level of deflocculation seems possible. The Respondent has conceded (at the oral proceedings before the Board) not to have any evidence supporting this allegation and the Board is not aware of any reason for expecting that even the minimal differences existing between the deflocculants described in amended claim 1 and those disclosed in document (2) (see above point 3.1.4) should have no bearing on their deflocculating capabilities. Hence, the Respondent's reasoning in this respect amounts to an unproven allegation and must be disregarded.

4.1.6 Therefore, in the absence of any convincing argument to the contrary, the Board can only conclude that the technical problem explicitly mentioned in the amended patent description i.e. that of **rendering available SSSCs with improved deflocculation**, was credibly solved vis-à-vis the prior art disclosed in document (2) by the claimed subject-matter.

4.1.7 Under these circumstances the question relevant for the assessment of inventive step amounts to establishing whether or not the skilled person would have replaced the deflocculants disclosed in document (2) by a deflocculant with an ETE orientation as defined in amended claim 1 in the expectation to achieve a superior deflocculation.

4.1.8 In the prior art referred to by the Respondent (see above point III) the Board has found no suggestion to use ingredients with an ETE orientation in order to achieve deflocculation. Nor has the Respondent maintained that the common general knowledge of the skilled person would suggest to the skilled person that this orientation could favour the achievement of a superior deflocculation.

4.1.9 Hence, the Board concludes that the skilled person would have no reason for solving the existing problem by using deflocculants with an ETE orientation as defined in amended claim 1.

Accordingly, the Board finds that the subject-matter of amended claim 1 is based on an inventive step.

4.2 Amended claims 2 to 20

Amended claims 2 to 19 refer to preferred embodiments of the detergent composition of amended claim 1 on which they depend and, hence, the Board finds that their subject-matter is based on an inventive step for the same reasons indicated above for amended claim 1. The same reasoning applies as well to the use defined in amended claim 20 of the deflocculant defined in amended claim 1 for deflocculating SSSCs.

4.3 Therefore, the Board concludes that the main request of the Appellant complies with the requirements of Article 56 EPC.

5. *Reimbursement of the appeal fee*

5.1 The Appellant has argued that the Opposition Division rejected the subject-matter of amended claim 1 for lack of inventive step without indicating the reasons as to why it ignored the comparative experimental evidence contained in document (12).

5.2 The Board notes that the appealed decision makes clear reference to document (12) not only in the "Summary of facts and submissions" but also at paragraph "iii)" of section "III)" of the "Reasons for the decision". Nevertheless, no explicit reference to document (12) is contained in section IV of the reasons of the decision, where it is concluded that the subject-matter of amended claim 1 is obvious.

Nevertheless, it is evident that the Opposition Division has considered obvious only the portion of

claimed subject-matter that was considered to represent a selection within the more generic disclosure provided by formula IV of document (2) (see in section IV of the decision under appeal "*For a selection from a larger formula to be considered inventive it is necessary to show that the specific selection provides an unexpected effect. Such an effect **has not been shown** for the polysulphonates and the subject-matter of amended claim 1...*", emphasis added by the Board).

In the Board's opinion, the fact that document (12) undisputedly does not comprise any experimental comparison referring to polysulphonate deflocculants renders evident that the Opposition Division has considered the experimental data in document (12) not relevant to the specific deflocculant whose use in SSSCs was found obvious in view of document (2).

Hence, the Board concludes that the reason for which the Opposition Division has neglected document (12) could be deduced without difficulty from the decision under appeal by a reasonable reader familiar with the content of document (12).

5.3 Accordingly, the decision under appeal is found to indicate implicitly but unambiguously the motivation of the Opposition Division for disregarding document (12), as well as for rejecting amended claims 1 and 5 to 20 and revoking the patent.

Therefore, the Board concludes that there has been no procedural violation and that the Appellant's request for the reimbursement of the appeal fee must be refused.

6. *Remittal to the First Instance*

Since the Appellant has requested to further adapt the description to the amended claims of the main request if these were found by the Board to comply with the EPC,

since the Opposition Division has only decided that the present amended patent description fulfils the requirements of Article 123(2) EPC (see point I of the decision under appeal),

since the parties have not discussed the adaptation of the description in view of Article 84 EPC and

since the present description is manifestly not consistent with the amended claims (see, for instance the difference between the definition of the deflocculant in amended claim 1 and that given at page 7, lines 46 to 54; or the different definition of "X" in amended claim 1 and at page 11, line 4)

the Board considers it appropriate to exercise its discretion under Article 111(1) EPC and to remit the case to the Opposition Division for further adaptation of the description.

Order

For these reasons it is decided that:

- (a) The decision under appeal is set aside.

The case is remitted to the First Instance with the order to maintain the patent with the following documents:

1 - claims 1 to 20 filed with letter of 25 September 2002 (main request)

2 - a description to be adapted.

- (b) The request for reimbursement of the appeal fee is rejected.

The Registrar:

The Chairman:

A. Wallrodt

G. Raths