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Datasheet for the decision of 25 April 2007

Case Number: T 0707/05 - 3.3.06

Application Number: 91104837.9

Publication Number: 0462365

IPC: D21H 21/54

Language of the proceedings: EN

Title of invention:
Charged organic polymer microbeads in paper making process

Patentee:
Ciba Specialty Chemicals Water Treatments Limited

Opponent:
SNF SAS

Headword:
Paper making/CIBA

Relevant legal provisions:
EPC Art. 84, 123(3)

Keyword:
"Main and second auxiliary requests: lack of support"
"First and third auxiliary requests: extension of protection conferred"

Decisions cited:
G 0009/91

Catchword:
-

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Case Number: T 0707/05 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 25 April 2007

Appellant: (Opponent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 31 March 2005 concerning maintenance of European patent No. 0462365 in amended form.

Composition of the Board:

Chairman: P.-P. Bracke
Members: G. Dischinger-Höppler
U. Tronser

Summary of Facts and Submissions

I. European patent No. 0 462 365 was granted on the basis of 5 claims containing one single independent method claim (Claim 1) which reads:

"1. A method of making paper which comprises adding to an aqueous paper furnish ionic, organic, polymeric microbeads, characterized in that the ionic, organic, polymeric microbeads

a) are added to the aqueous paper furnish in an amount of from 0.02 to 9.07 kg/907 kg (0.05 to 20 lbs/ton), based on the dry weight of the paper furnish solids,

b) have an unswollen particle diameter of less than 750 nanometers if cross-linked and less than 60 nanometers if non-cross-linked and water-insoluble, and

c) have an ionicity of at least 1%, but at least 5% if cross linked, anionic and used as the sole retention additive".

II. A notice of opposition had been filed against the granted patent, wherein the Opponent sought revocation of the patent on the grounds of Article 100(a) EPC due to lack of novelty and lack of inventive step (Articles 52(1), 54(2) and 56 EPC). The opposition was based on several documents.

III. The appeal of the Opponent, now Appellant, is from the interlocutory decision of the Opposition Division

concerning maintenance of the patent in amended form on the basis of the then pending sole request filed by the Patent Proprietor, now Respondent, during oral proceedings before the Opposition Division. This request contains two independent method claims (Claims 1 and 4) which read:

"1. A method of making paper which comprises adding to an aqueous paper furnish ionic, organic, polymeric microbeads, characterized in that the ionic, organic, polymeric microbeads

a) are added to the aqueous paper furnish in an amount of from 0.02 to 9.07 kg/907 kg (0.05 to 20 lbs/ton), based on the dry weight of the paper furnish solids,

b) have an unswollen number average particle diameter of less than 750 nanometers (determined by the quasi-elastic light scattering spectroscopy (QELS)),

c) are crosslinked, and

d) have an ionicity of at least 1%, but at least 5% if anionic and used as the sole retention additive,

e) and wherein from 0.45 to 22.68 kg/907 kg (1.0 to 50 lbs/ton), same basis, of an ionic polysaccharide is added to said furnish in conjunction with said microbeads.

4. A method of making paper which comprises adding to an aqueous paper furnish ionic, organic, polymeric microbeads, characterized in that the ionic, organic, polymeric microbeads

a) are added to the aqueous paper furnish in an amount of from 0.02 to 9.07 kg/907 kg (0.05 to 20 lbs/ton), based on the dry weight of the paper furnish solids,

b) have an unswollen number average particle diameter of less than 750 nanometers (determined by the quasi-elastic light scattering spectroscopy (QELS)),

c) are crosslinked, and

d) have an ionicity of at least 1%, but at least 5% if anionic and used as the sole retention additive,

e) wherein from 0.02 to 9.07 kg/907 kg (0.05 to 20 lbs/ton), same basis, of a high molecular weight, ionic polymer is added to said furnish in conjunction with said microbeads, and

d) wherein from 0.04 to 9.07 kg (0.1 to 20 pounds) of an active soluble aluminium species is also added per 907 kg (ton) of paper furnish solids to the furnish."

IV. During the appeal proceedings, the Respondent maintained this request as its main request and filed,

under cover of a letter dated 20 March 2007, further amended sets of claims in three auxiliary requests.

Claims 1 and 4 of the first auxiliary request differ from those of the main request by deleting in feature d) the term "but at least 5% if anionic and used as the sole retention additive,".

Claims 1 and 4 of the second auxiliary request differ from those of the main request by replacing in feature b) the figure 750 by 300.

Claims 1 and 4 of the third auxiliary request differ from those of the first auxiliary request also by replacing in feature b) the figure 750 by 300.

V. Upon requests made by both parties, oral proceedings were held before the Board on 25 April 2007.

VI. The Appellant, orally and in writing, submitted amongst other the arguments

- that Claims 1 and 4 of the main and second auxiliary requests were not allowable due to non-compliance with the requirements of Article 84 EPC introduced by the addition of feature e) either for lack of clarity or for being not supported by the description

- and that the claims of the first and third auxiliary requests were not allowable for extension beyond the protection conferred by the patent according to Article 123(3) EPC due to the

deletion of the term "but at least 5% if anionic and used as the sole retention additive,".

VII. The Respondent refuted the Appellant's arguments.

Concerning the objection under Article 84 EPC, it was essentially argued that it was well-known to those skilled in the art that depending on the procedural circumstances the ionic polysaccharide or the high molecular weight (HMW) ionic polymer would not function as a retention aid.

Concerning the objection under Article 123(3) EPC, the Appellant argued that the deletion of the term "but at least 5% if anionic and used as the sole retention additive," was possible since this would limit the claimed subject-matter to those instances where the ionic polysaccharide and HMW polymer are added as a retention additive.

VIII. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Respondent requested that the appeal be dismissed, or the decision under appeal be set aside and the patent be maintained on the basis of the claims according to one of the auxiliary requests 1 to 3 submitted under cover of the letter dated 20 March 2007.

Reasons for the Decision

1. *Main and second auxiliary requests (Article 84 EPC)*

1.1 In cases where substantive amendments have been made to a granted patent, the Opposition Division as well as the Boards have the power to deal with grounds and issues arising from those amendments and to decide on the amended patent in the light of the requirements of the EPC as a whole.

This is the established jurisprudence of the Boards of Appeal (e.g. G 9/91, OJ EPO 1993, 408, reasons No. 19). Accordingly, even if no opposition against a patent can be based on problems under Article 84 EPC (see Article 100 EPC), in cases where amendments are made to a granted patent, the Boards may decide on the amended version under Article 84 EPC if such problems arise out of the amendments (Case Law of the Boards of Appeal, 5th edition 2006, chapter VII.C.6.2).

1.2 In the present case, Claim 1 as granted relates to a method of making paper comprising the addition of cross-linked polymeric microbeads to the paper furnish wherein the microbeads have an ionicity of at least 1%, but at least 5% if anionic and used as the sole retention additive.

According to the Respondent's main and second auxiliary requests, this claim has been amended essentially by formulating two independent method claims and incorporating in each case a feature e) so that the method comprises the addition to the paper furnish of polymeric anionic microbeads having an ionicity of at

least 5% as the sole retention additive in conjunction with an ionic polysaccharide (Claim 1) or a high molecular weight (HMW) ionic polymer (Claim 4).

1.3 The Respondent argued that the ionic polysaccharide or HMW ionic polymer is not necessarily qualified as a retention additive but may be also added to improve the strength of the paper product. Whether the effect of the polysaccharide was to improve retention or strength depended on the circumstances, in particular the point of addition, the specific kind of polysaccharide and the amount added.

Thus, it was apparent to those skilled in the art that according to Claims 1 and 4 the ionic polysaccharide or HMW polymer is added under circumstances to improve the strength rather than the retention if the ionicity of the anionic microbeads was at least 5%. Therefore, the claimed subject-matter was perfectly clear.

1.4 The Board agrees with the Respondent insofar as Claim 1 fulfils the requirement of clarity, however, only if interpreted in the above manner, namely that the ionic polysaccharide or HMW polymer must be added under circumstances so that it does not perform as a retention additive if the microbeads are anionic and have an ionicity of at least 5% since the requirement of such an ionicity would be in contradiction to the presence of ionic polysaccharide or HMW polymer as a further retention additive.

This definition of Claim 1 is not, however, supported by the description of the patent in suit for the following reasons:

The Board observes that the term "ionicity" is not present in the description of the patent in suit. However, with regard to that term both parties relied on the disclosure on page 6, lines 4 to 13 of the patent. Accordingly, the term "ionicity" stands for the total ionic charge of a polymer given as the percentage by weight of ionic monomers in the polymeric material.

The disclosure on page 6, lines 4 to 13 is further the only reference in the description relating to the ionicity requirement of Claim 1. In this regard, the following statements are made

- "the total ionic charge in the microbead must be greater than about 1%" (page 6, lines 9 to 10),

- "Mixtures of polymeric microbeads may also be used if the total ionic charge of the mixture is also over about 1%" (page 6, lines 10 to 11) and

- "If the anionic microbead is used alone, i.e. in the absence of high molecular weight polymer or polysaccharide, in the process of the present invention, the total anionic charge thereof must be at least about 5%" (page 6, lines 11 to 13).

It is specifically the last statement which forms the only basis in the description of the patent in suit indicating the circumstances under which an ionicity of the anionic microbeads of at least 5% is required. These circumstances are explicitly stated as "in the absence of HMW polymer or polysaccharide".

Consequently, it is apparent to the skilled reader of the patent in suit that in the presence of an ionic polysaccharide or HMW polymer it is sufficient that the ionicity of anionic microbeads is at least 1%, irrespective of whether, under circumstances, those additives may serve to improve paper strength or retention. This does, however, not provide a basis for the now claimed embodiment of adding to an aqueous paper furnish anionic microbeads having an ionicity of at least 5% in conjunction with an ionic polysaccharide or HMW polymer which do not perform as retention additives.

The Board has not overlooked the fact that the patent contains numerous examples where anionic microbeads having an ionicity of more than 5% are added to the paper furnish in conjunction with an ionic polysaccharide or HMW polymer, however, none showing that the latter does not perform as a retention additive.

1.5 The Board, therefore, concludes that the claims as amended in the main and second auxiliary requests are not supported by the description, and hence not allowable under the provisions of Article 84 EPC.

2. *First and third auxiliary requests (Article 123(3) EPC)*

Article 123(3) EPC prohibits amendments to granted claims in such a way as to extend the protection conferred by a European patent.

2.1 Claim 1 as granted is directed to a method of making paper comprising the addition of cross-linked

polymeric microbeads to the paper furnish wherein the microbeads have an ionicity of at least 1%, but at least 5% if anionic and used as the sole retention additive.

In contrast, Claims 1 and 4 of the first and third auxiliary requests no longer require an ionicity of at least 5% of the microbeads if anionic and used as the sole retention additive but instead the addition of an ionic polysaccharide or HMW polymer.

2.2 In order to answer the question of whether this amendment is contrary to the provisions of Article 123(3) EPC, it is necessary to determine the extent of protection conferred by the claims as granted against the protection conferred by the claims in the amended form.

2.3 The Respondent argued that the term "but at least 5% if anionic and used as the sole retention additive" can be removed if it is clearly and unambiguously evident that the ionic polysaccharide (and HMW polymer) must be a retention additive.

The Board shares this view, observes however that there is nothing in the description of the patent from which such direct and unambiguous disclosure could be derived since the only relevant passage in the description (page 6, lines 11 to 13) is totally silent as concerns the effect of the HMW polymer or polysaccharide but merely states that the ionicity of anionic microbeads must be at least 5% if such additives are absent.

Moreover, it is undisputed, specifically by the Respondent (see 1.3 above), that ionic polysaccharides or HMW polymers may be used in papermaking as an additive for improving strength and/or retention.

Therefore, Claim 1 as granted covered the embodiments of adding the ionic polysaccharide or HMW polymer in conjunction with anionic microbeads having an ionicity of at least 1%, if the former improve retention or if another retention additive is additionally used or, alternatively, in conjunction with anionic microbeads having a ionicity of at least 5% if the ionic polysaccharide or HMW polymer is used so as not to improve retention and no other retention additive is used.

In contrast, in the amended versions, Claims 1 and 4 cover the possibility of adding anionic microbeads having an ionicity of at least 1% in conjunction with ionic polysaccharide or HMW polymer, irrespective of whether the latter are used for retention or strength but no longer require that the anionic microbeads must have an ionicity of at least 5% if used as the sole retention additive.

Therefore, the Board concludes that the amendments made to Claims 1 and 4 extend the protection conferred by the claims as granted.

2.4 For the reasons set out above, the Board, therefore, finds that the amendments made to the claims of the first and third auxiliary requests are contrary to 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.-P. Bracke