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Datasheet for the decision of 25 November 2010

Case Number: T 2069/08 - 3.2.05

Application Number: 99309175.0

Publication Number: 1084859

IPC: B41M 5/00

Language of the proceedings: EN

Title of invention:
Recording material

Patentee:
TEIKOKU PRINTING INKS MFG. CO., LTD

Opponent:
Mitsubishi HiTec Paper Europe GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 123(2)

Relevant legal provisions (EPC 1973):
-

Keyword:
"Subject-matter extending beyond content of application as filed (no)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 2069/08 - 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 25 November 2010

Appellant I: (Patent Proprietor)
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Appellant II: (Opponent)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 20 August 2008 concerning maintenance of European patent No. 1084859 in amended form.**

Composition of the Board:

Chairman: W. Zellhuber
Members: P. Michel
M. J. Vogel

Summary of Facts and Submissions

I. Appellants I and II (patent proprietor and opponent respectively) both lodged appeals against the decision of the Opposition Division maintaining European Patent No. 1 084 859 in amended form.

II. Oral proceedings were held before the Board of Appeal on 25 November 2010, in the absence of appellant I, who informed the Board on 12 November 2010 that appellant I would not be represented at the oral proceedings.

In the written proceedings, appellant I requested that the decision under appeal be set aside and the patent in suit be maintained as granted.

Appellant II requested that the decision under appeal be set aside and the patent in suit revoked in its entirety.

III. Claim 1 as maintained by the opposition division reads as follows:

"1. A method of manufacturing a recording material comprising providing a record reception layer on at least one face of a base material by coating or printing a resin liquid substance on the base material and curing the resin liquid substance wherein silica is scattered in the resin liquid substance, the silica being both a large particle size sponge silica having a particle size 8 to 18 µm and a small particle size sponge silica having a particle size 1 to 7 µm where the pore volume of the large particle size silica and small particle size silica is 0.7 to 7 ml/g and where

the silica particles are manufactured by a gelling method."

IV. The following documents are referred to in the present decision:

D1: JP-A-11227316
D2: US-A-4,780,356
D3: EP-A-0 701 179

V. Appellant I filed neither a statement setting out the grounds of appeal nor any arguments in the written proceedings and did not attend the oral proceedings.

VI. Appellant II argued substantially as follows in the written and oral procedure:

In claim 1 as maintained, the word "contains" in the application as filed has been replaced by the word "being". The presence of particles of a size between 7 and 8 µm is thus excluded by the claim. Since it is technically possible to remove particles having sizes below 1 µm, between 7 and 8 µm, and above 18 µm, from a wide distribution of particle sizes, the claim must be construed as having the meaning which first occurs to the skilled person, without the necessity to refer to the description. There is no disclosure in the application as filed of the use of silica consisting only of particles in the specified particle sizes. The use of a gelling method results in particles having a single particle size distribution, so that there exists a contradiction between the use of a gelling method and the specified two distinct particle size ranges.

Silica particles having a size between 7 and 8 µm are included in the list of optional additives set out in paragraph [0016] of the application as filed, so that it is clear that the presence of particles of this size is not excluded. The Examples specify silica of a particle size of 11 and 5 µm. This refers to particles sizes within the ranges specified in claim 1 and is thus consistent with the claim.

The application does not refer anywhere to an average particle size. In any case, there are a number of ways to specify average particle size, e.g. by number, weight or volume.

Claim 1 as maintained is derived from claim 10 as filed with the addition of features drawn from the description, including the specified pore volume, and the claims. There is, however, no disclosure of the particular combination claimed (see decision T 727/00).

The presence of the features relating to the pore volume and particle size in claim 1 implies that the reference to a gelling method means a specific gelling method which achieves both the specified parameters, thus resulting in a limitation which is not disclosed in the application as filed.

The application as filed thus does not disclose a method as claimed in claim 1.

In the event that the Board is inclined to reach the opposite conclusion, the following question should be referred to the Enlarged Board:-

"Ist eine individualisierte technische Lehre auch dann in einem Dokument implizit offenbart, wenn sie zwar denkgesetzlich vom explizit Gesagten umfasst ist, aber Ergebnis einer Kombination zweier allgemein im Dokument genannten technischen Lehren ist, die bei Kombination aneinander angepasst werden müssen?"

Document D2 discloses a method in which various silica fractions are used (see Example 1 and the table in column 4). Claim 1 is not restricted to a bimodal distribution and it is not relevant whether or not silica having a size between 7 and 8 µm is present.

Insofar as the subject-matter of claim 1 is regarded as being distinguished from the disclosure of document D2 by virtue of the use of large and small particle size sponge silica, the requirements for a selection invention are not met.

The subject-matter of claim 1 thus lacks novelty in view of the disclosure of document D2.

Document D1 may be regarded as the closest prior art. This document discloses two methods of manufacturing the silica, that is, the gel method and the sedimentation method (see paragraphs [0008] to [0010]). If the gel method is chosen, the sole distinguishing feature is the specified pore volume.

The problem to be solved is to provide a method of manufacturing a recording material which has a sufficient ink receptivity. In order to solve this problem, the person skilled in the art would modify the

manufacturing process so as to increase the pore volume and arrive at the specified value as a result of mere optimisation, which cannot require an inventive step.

In an alternative approach, document D2 may be regarded as constituting the closest prior art. This document discloses the use of silica particles in two different size ranges and having a specified pore size and volume. Either on the basis of document D2 alone, or in combination with document D1, it would be obvious to adopt the particle size distribution of claim 1 of the patent in suit.

The subject-matter of claim 1 thus lacks an inventive step.

Reasons for the Decision

1. Admissibility of the appeal of appellant I

Appellant I has not filed a statement of grounds. The appeal of appellant I is thus inadmissible, so that the present proceedings concern only the form in which the patent in suit was maintained by the opposition division.

2. Amendments

Claim 1 specifies that the silica consists of silica of the two specified particle sizes and is sponge silica manufactured by a gelling method.

Paragraph [0007] of the application as filed (published version) discloses a recording material in which a resin layer contains both of a large particle size silica and a small particle size silica. The skilled person reading this passage with a will to understand the document would not assume that this includes a unimodal silica which has a particle size range spanning the two specified ranges. Rather, the paragraph must be understood as referring to a bimodal silica having a distribution curve which has a peak in each of the specified particle size ranges. This does not exclude the presence of silica falling within the particle size range of 7 to 8 µm, but specifies that there are two populations of particle sizes which may overlap to an unspecified degree. Such a distribution can be obtained by use of a gelling method to prepare each of the two populations. It is thus not necessary to assume that the specified particle size distribution is obtained by filtering out unwanted size fractions in the absence of any reference to such a procedure in the patent in suit. It is thus directly and unambiguously derivable from the application as filed that the silica contained in the resin layer is a large particle size silica and a small particle size silica.

The inclusion of silica having a particle size of 7 to 8 µm in the list of optional additives at paragraph [0016] of the application as filed does not allow any conclusions to be drawn concerning the presence or absence of silica in this size range resulting from the preparation of silica by the gelling method in the two specified particle sizes. Similarly, the fact that the preferred embodiment utilizes silica having the particle sizes of 5 and 11 µm provides no indication as

to the amount of silica present outside the ranges specified in claim 1.

Claim 5 of the application as filed indicates that the silica of both particle sizes is preferably sponge silica. Paragraph [0017] of the description discloses that the sponge silica may be made by the gelling method.

The features of particle size distribution, pore volume and silica manufactured by a gelling method are disclosed in the application as filed as independent features. Thus, the disclosure of particle size distribution in paragraph [0007] is prefaced by the words "the present invention provides…". Paragraph [0017] states that the "sponge silica … is a structural element according to the invention". The disclosure of the application as filed thus suggests that these features may be combined, as in claim 1 as maintained by the opposition division. Whilst it is the case that the gelling method must be carried out in such a manner as to result in populations of silica having the specified characteristics, this does not result in a combination of features which is not disclosed in the application as filed.

Decision T 727/00 concerns the selection of compounds and ranges drawn from each of two lists which thus concern different features, so that the combination of features was not disclosed in the application as filed. This does not apply to the present case, in which no selection from a list of alternatives is involved.

Thus, in order to arrive at a decision in the present case concerning the disclosure of the application as filed, it is not necessary to answer the general question submitted by the appellant and it is hence not necessary to refer the question to the Enlarged Board.

The subject-matter of claim 1 is thus disclosed in the application as filed, so that the requirements of Article 123(2) EPC are satisfied.

3. Novelty

Document D2 does not disclose the use of silica having a bimodal particle size distribution, that is, having a particle size distribution having the characteristics as discussed under point 2 above.

Whilst it is argued that the subject-matter of claim 1 does not satisfy the criteria for a selection invention, the use of bimodal silica represents a qualitative distinction with respect to the disclosure of document D2 rather than a mere selection of a more restricted particle size.

The subject-matter of claim 1 is thus new.

4. Inventive step

Document D1 is regarded as representing the closest prior art, disclosing a recording material in which the ink receptor layer contains two kinds of amorphous silica, the first having an average particle diameter of 3 to 5 µm and the second having a particle size of 5 to 10 µm (see paragraph [0012] and claim 1). In

paragraph [0008], the gel method of producing amorphous silica is described. In paragraph [0009], the sedimentation method of producing amorphous silica is described. In paragraph [0010], the products of the two methods are compared, it being noted that pore volume is greater for silica produced by the sedimentation method. The paragraph concludes that silica manufactured by the sedimentation method has a suitable particle size and specific surface area to enable the production of a high definition image in ink jet printing and accepted pencil notes. The conclusion that document D2 teaches that the use of the sedimentation method has advantages over the gelling method is confirmed by the fact that this feature is specified in claim 1. It should be noted that the Board does not consider that the disclosure of a patent document is limited by the scope of the claims, and that the presence of this feature in claim 1 merely acts as a confirmation of a statement in the description.

Accordingly, the skilled reader of document D1, wishing to produce a recording material having a satisfactory receptivity, would be discouraged from using silica formed by a gelling method and would use silica produced by a sedimentation method. Rather than attempt to manipulate the gel method in order to obtain a desired particle size, document D1 suggests using a silica formed by a sedimentation method having a specified specific surface area.

The subject-matter of claim 1 is thus distinguished over the disclosure of document D1 in that the silica is sponge silica manufactured by a gelling method and

in that particle sizes of 8 to 18 µm and 1 to 7 µm are used.

Whilst document D2 refers to the use of a gelling method in the paragraph at column 4, lines 49 to 57, this is merely an example of "a suitable conventional method". In order to achieve high image quality, document D2 proposes using particles having a specified particle size, pore volume and pore size. There is no suggestion in document D2 which would lead the person skilled in the art to modify the teaching of document D1 by using a gel method rather than a sedimentation method to prepare the silica.

In an alternative approach, it is suggested that document D2 could be regarded as the closest prior art. In particular, this document discloses that the silica is produced by a gelling method (column 4, lines 51 to 57). There is, however, no suggestion of the use of silica having two particle size populations. The samples set out in the table of column 4, lines 9 to 23, have a particle size distribution with a single peak. Thus, for example, sample no. 4 contains 50% or higher by weight of particles having a particle size of 3 to less than 8 µm, with the amounts of particles larger and smaller than this specified in the two remaining columns of the table.

Thus, the subject-matter of claim 1 is distinguished over the disclosure of document D2 in that silica having two particle size populations is used. There is, however, no suggestion in document D1 that an improvement in the recording medium could be obtained by using silica having two particle size populations

without also adopting a sedimentation method to produce the silica.

In addition, according to document D1, the larger particles should be in the size range 5 to 10 µm, whereas claim 1 of the patent in suit specifies a range of 8 to 18 µm. The only examples in which the larger particles are in the size range 8 to 18 µm are those of paragraphs [0046] and [0047], which are shown in Table 1 of document D1 to be comparison examples having unsatisfactory properties. Thus, document D1 does not offer an inducement to adopt the particle size ranges specified in claim 1.

It has further been suggested that document D3 could represent the closest prior art. However, this document relates to printing plates having a recording layer containing two kinds of extender pigments. Whilst it is disclosed that the extender pigment may be silica (page 4, line 44), there is no disclosure concerning the porosity or method of manufacture of the silica. This document thus cannot be regarded as the closest prior art.

The subject-matter of claim 1 thus involves an inventive step.

Order

For these reasons it is decided that:

1. The appeal of the patent proprietor is rejected as inadmissible.

2. The appeal of the opponent is dismissed.

The Registrar: The Chairman:

D. Meyfarth W. Zellhuber