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**Datasheet for the decision
of 15 March 2010**

Case Number: T 1499/07 - 3.3.01

Application Number: 01102090.6

Publication Number: 1152041

IPC: C09D 5/02

Language of the proceedings: EN

Title of invention:

Coating system for the preparation of aqueous coating compositions

Patentee:

E.I. DU PONT DE NEMOURS AND COMPANY

Opponent:

Akzo Nobel N.V.
BASF Coatings AG

Headword:

Coating systems for aqueous coating compositions

Relevant legal provisions:

EPC Art. 123(2)(3), 113(1), 54, 56
RPBA Art. 13(1)(3)

Relevant legal provisions (EPC 1973):

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Keyword:

"Main request - Novelty (yes)"
"Inventive step (yes) - unexpected improvement shown"
"Introduction of late-filed document (no) - Right to be heard (yes)"

Decisions cited:

T 0181/82, T 0270/90

Catchword:

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Case Number: T 1499/07 - 3.3.01

D E C I S I O N
of the Technical Board of Appeal 3.3.01
of 15 March 2010

Appellant I

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
10 July 2007 concerning maintenance of European
patent No. 1152041 in amended form.

Composition of the Board:

Chairman: C. M. Radke
Members: J.-B. Ousset
C.-P. Brandt

Summary of Facts and Submissions

I. Opponents I and II, now appellants I and II, both appealed the decision of the opposition division to maintain the European patent No. 1 152 041 on the basis of the nine claims of the main request filed by the patentee with his letter of 27 April 2007 (then as claims of the auxiliary request) and the corresponding amended description filed during oral proceedings before the opposition division.

II. Claim 1 of the main request reads as follows:

"1. Coating system for the preparation of aqueous coating compositions, comprising the combination of, as separate components,

A) 55-95 wt-% of at least one special effect pigment composition comprising water, at least one special effect pigment, and at least one anionically and/or non-ionically modified water-dilutable polyurethane resin, the amount of said water constituting 30-75 wt-% based on the total weight of said component A, and

B) 5-45 wt-% to total 100% of the total weight of said components A plus B, of a pigment-free composition comprising

B1) 0.3-5.0 wt-% of at least one inorganic layered silicate,

B2) 1.0-20.0 wt-% of at least one water-dilutable polyurethane resin,

B3) 75.0-98.7 wt-% water,

the weight percents of B1, B2 and B3 adding up to 100 wt-% of said component B."

III. The opposition division considered that grounds under Article 100(b) and (c) EPC did not prejudice the maintenance of the patent based on the main request. Moreover, novelty and inventive step were acknowledged vis-à-vis the documents (2) and (6).

IV. Among the documents cited by the parties during the opposition proceedings, the following one is relevant for the present decision:

(2) DE-A-43 01 991

V. With a letter of 12 November 2007, appellant I set out its grounds of appeal and argued as follows:

- The differences between the disclosure of document (2) and the content of the patent in suit lay in the nature of the rheology control agent B and the relative amounts in which components A and B were used. These differences represented only a juxtaposition of features which must be assessed individually for inventive step. Due to the absence of any comparative evidence, these differences did not have any technical effect.
- The problem to be solved was thus the mere provision of an alternative aqueous storage stable molecular system suitable for the preparation of an aqueous effect pigment-containing coating composition.

- The solution as defined in the present claims lacked an inventive step, because the substitution of the polyacrylic acid based thickeners by inorganic layered silicates is easily made on the basis of the information provided in document (2), which disclosed inorganic layered silicates as rheology control agents. Moreover, document (2) also taught that the modules are mixed in such a manner to adjust the desired effect.

VI. With a letter of 14 November 2007, appellant II also provided its grounds of appeal and argued as follows:

- The difference between the claimed subject-matter and the disclosure of document (2) was to be found in the absence in document (2) of a disclosure of the amount of inorganic layered silicate and of the ratio between the components A and B.
- The use of the components A and B in a different ratio did not achieve any technical effect vis-à-vis document (2).
- The addition of a rheology control agent is optional in document (2) but all the examples of this document contained such a rheology control agent. Its addition was thus obvious.
- The relative amount of rheology control agent is also obvious for the person skilled in the art. Moreover, different amounts of rheology control agent were used in several cited documents. Document (2) also mentioned the use of inorganic layered silicates as rheology control agents.

- The use of inorganic layered silicates instead of polyacrylic acids as rheology control agents did not lead to any technical effect and thus an inventive step vis-à-vis document (2) was not to be acknowledged.

- The respondent has not shown that the problem underlying the patent in suit was solved, that is to say, that the alleged advantages in the description were substantiated vis-à-vis the disclosure of document (2).

- The provision of a mere alternative coating system was obvious for the person skilled in the art. The variation of the ratio of the different components A and B was considered as obvious for the person skilled in the art. Moreover, the compositions described in document (2) contained the same effect pigments, exhibited an appropriate rheology and a good covering power, and were stable and easy to filtrate as compared to the ones disclosed in the patent in suit. The covering power was dependent of the nature of the pigment. The drain-off properties as well as an appropriate rheology could be adapted by the person skilled in the art using its technical knowledge. Dependent claims 2 to 7 and use-claims 8 to 9 were also not based on an inventive step.

VII. With a letter of 30 May 2008, the respondent submitted three auxiliary requests and argued as follows:

- Additionally to the absence of mention of inorganic layered silicate and its amount in the examples of document (2), the ranges for the weight ratio of components A and B were significantly different in the documents of the state of the art when compared to the subject-matter of the claims of the patent in suit.
- The better rheological properties of the claimed coating compositions due to the replacement of the thickener/polyacrylic acid by the system layered silicate/polyurethane resin were surprising in view of the teaching of document (2).
- The appellant's arguments concerning the compositions of document (2), which could be used as paints, was not followed, since optimisation was still necessary.
- Document (2) did not disclose inorganic layered silicate in an amount of 0.3 to 5 wt-% in combination with a polyurethane resin, which could be diluted with water. From the disclosure of document (2), the person skilled in the art would not have any hint to use such a combination.

The following comparative data were also provided to support its argument:

- (13) "Vergleichsversuche" as "Annex A" submitted with the respondent letter of 30 May 2008.

VIII. Oral proceedings took place on 15 March 2010.

- IX. The appellants requested that the decision under appeal be set aside and the European patent No. 1 152 041 be revoked.
- X. The respondent requested that the appeals be dismissed or, in the alternative that the patent be maintained on the basis of the first, second or third auxiliary request, filed with the letter dated 30 May 2008.
- XI. At the end of the oral proceedings, the decision of the board was announced.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. Admissibility of document US 4 558 090
- 2.1 Document US 4 558 090 was first introduced by the appellants during oral proceedings before the board when disputing the relevance of the comparative tests (13) filed by the respondent on 30 May 2008.

As US 4 558 090 is mentioned in the patent in suit and in document (13) there is no reason that it could not have been cited by the appellants earlier. Hence it is late filed. The board has thus to examine its admissibility in view of the Rules of Procedure of the Boards of Appeal and more particularly on the basis of Article 13 of these Rules.

- 2.1.1 The appellants submitted that document US 4 558 090 should be admitted into the proceedings, because, as being referred to in document (13), the respondent had to expect that the relevance of the data provided by him would be questioned by the appellants. Moreover, this document was necessary for allowing the appellants to defend their case. Although the appellants' argument using document US 4 558 090 was presented for the first time during oral proceedings, they had the right to take position on the content of document (13).
- 2.1.2 The board does not share this view. Although it is not disputed that document US 4 558 090 was cited in the patent in suit and thus well-known by the respondent, it remains that the introduction of document US 4 558 090 into the proceedings represents an amendment of the appellants' case and is thus subject to the discretion of the board. Document (13) has been filed by the respondent with its response of 30 May 2008 to the appellants' arguments presented in their respective statements setting out the grounds of appeals. Hence, the appellants had more than twenty months to take position on document (13) and to argue as to its relevance. The board could not have admitted document US 4 558 090 and the arguments based on it into the proceedings without giving the respondent the chance to respond in an appropriate way, e.g. by preparing comparative tests different than those of document (13). Hence, these fresh arguments raised issues, which could not be dealt with by the respondent without postponing the oral proceedings.

2.2 Therefore, the appellants' case as far as based on document US 4 558 090 was not admitted into the proceedings (Article 13(3) RPBA).

3. Alleged procedural violation

3.1 The appellants argued that they were entitled to take position on document (13) and by refusing the admission of document US 4 558 090 into the proceedings, their right to be heard had been infringed, amounting thus to a procedural violation (Article 113(1) EPC). The appellants explained that the introduction of document US 4 558 090 into the proceedings was necessary to give them the possibility to take position on the relevance of document (13). The making of component B in document (13) referred to example 3 on page 9 of the patent in suit, itself mentioning that the polyurethane resin dispersion of said example 9 was made according to US 4 558 090.

3.2 The board considers that the appellants had the possibility to argue in writing on the relevance of document (13) which was provided more than twenty months before oral proceedings. They had "an opportunity to present their comments" as required in Article 113(1) EPC.

3.3 The board thus concludes that the appellants' right to be heard has not been infringed (Article 113(1) EPC).

4. Amendments

4.1 None of the appellants questioned the admissibility of the amendments carried out by the respondent. The board

is also satisfied that the main request fulfils the requirements of Article 123(2) and (3) EPC for the following reasons:

- The amendments in claim 1 are based on the original claim 1 and
- Claim 2 as originally filed, (the amount of water in component A)
- Claim 3 as originally filed (the water-dilutable resin has been limited to polyurethane resin).
- That the polyurethane resin is "anionically and/or non-ionically modified" is based on page 4, lines 6 to 7.

The remaining claims have been renumbered accordingly. The requirements of Article 123(2) EPC are met.

Moreover, the water-dilutable binders of component A as defined in the claims as granted are now limited to polyurethane.

4.2 Therefore the requirements of Article 123(2) and (3) are met.

5. Novelty

The board concurs with the parties that novelty of the claimed invention is to be acknowledged, since the subject-matter of claim 1 differs from the teaching of document (2) in that

- an inorganic layered silicate is used as a rheology control agent in component B in the amounts specified in the present claims;

- the respective proportions of A and B are not disclosed in the prior art.

None of the other documents cited before the department of first instance or during appeal proceedings discloses the compositions which are claimed in the main request.

6. Inventive step

6.1 Determination of the closest prior art

The parties considered document (2) to represent the closest prior art. The board agrees with this for the following reasons:

- The compositions of document (2) are used as aqueous coating compositions (see page 2, lines 3 to 11)
- The different modules used therein aim at obtaining storage stable coating systems as in the present invention (see page 1, lines 31 to 34)
- The compositions of document (2) contain one or more water dilutable anionic and/or non-ionic binders, one or more pigments, at least 20% weight water (see page 2, lines 40 to 46). Furthermore, polyurethane resins are preferred binders (see page 5, lines 7 to 8 in conjunction with page 3, lines 13 to 17). Moreover, the coating compositions can contain a rheology control agent (see page 2, lines 54 to 57, component "D"). This

rheology control agent can be a layered silicate (see page 5, lines 55 to 62).

The compositions of document (2) differ from those of the present invention in that the respective proportions of the components A and B, corresponding to the components A, B and D in document (2) are not mentioned in document (2). Moreover, document (2) does not disclose the use of the layered silicates in the amounts defined in the present claims.

6.2 Determination of the problem to be solved

6.2.1 The patent in suit mentions that one of the problems underlying the present invention lies in the provision of aqueous coating compositions which have an improved sagging resistance.

6.2.2 Document (13) describes the results obtained by an aqueous coating composition according to the patent in suit and a comparative aqueous coating composition which differs from the one of the present invention in that the rheology control agent in component B of the example 3 of the patent in suit has been replaced by a polyacrylic acid binder (Viscalex HV30) in such an amount that both aqueous coating compositions have the same viscosity when they are applied. The rheology control agent used in the examples of document (2) is also a polyacrylic acid (see examples 3 and 5). Furthermore, the weight ratio of the components A and B in document (13) (83 % versus 17%) is within the range mentioned in claim 1 of the main request. This ratio is not disclosed in document (2). Therefore, the comparative example of document (13) is even closer to

the claimed subject-matter than those of document (2). Hence, the only difference between these aqueous coating compositions of document (13) lies in the nature of the rheology control agent. Therefore, the results obtained in document (13) are relevant for assessing the presence of the alleged improvement (T 181/82, OJ EPO 1984, 401, point 5 of the reasons).

The first table on page 2 of document (13) (see second paragraph) shows that the aqueous coating composition 1 (according to the invention) has a yield point, namely the pressure to be applied from which the composition begins to sag, of 1.433 Pa, whereas the aqueous coating composition 2 (comparative composition) has a yield point of 1.014 Pa. These results show an improvement in the sagging resistance of the aqueous coating compositions of the invention and thus the problem mentioned above has been solved by the claimed subject-matter.

6.3 The solution

It should be verified whether this solution was obvious or not in view of the available prior art.

- 6.3.1 There is nothing in document (2) or in the other documents cited by the appellants during the opposition or appeal proceedings, which could give the person skilled in the art a specific hint to select a layered silicate as a rheology control agent in order to achieve an improved sagging resistance of the aqueous coating compositions of document (2). Although document (2) itself mentions the layered silicates as a possible rheology control agent to be used, there is nothing in

this document telling the person skilled in the art that such an improvement could be achieved by using these layered silicates.

- 6.3.2 Additionally to the arguments provided in the written proceedings by the appellants, it was further argued that it was not credible that the improvement shown by a specific example according to the invention would be achieved over the whole scope of the claims.

As this argument was raised by the appellants, the onus is on them to provide evidence in support of this. In view of the fact that the appellants did not provide such an evidence and the board cannot verify the facts alleged, this goes to the detriment of the appellants (see T 270/90, OJ EPO 1993, 725, in particular point 2,1, the bottom paragraph on page 726). Therefore, the board cannot follow this argument.

- 6.4 The board concludes that the subject-matter of claim 1 of the main request is based on an inventive step (Article 56 EPC). Dependent claims 2 to 7 and use-claims 8 to 9 are thus also inventive.

7. These claims are identical to the ones deemed to be allowable according to the decision under appeal. No other objections were raised during the appeal proceedings against these claims or against the description adapted thereto during the opposition proceedings, nor does the board see any reasons to raise such an objection. Hence, the appeals cannot succeed.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar

The Chairman

B. Atienza Vivancos

C. M. Radke