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**Datasheet for the decision  
of 8 September 2010**

**Case Number:** T 0351/08 - 3.4.02

**Application Number:** 96307246.7

**Publication Number:** 0767362

**IPC:** G01J 3/46

**Language of the proceedings:** EN

**Title of invention:**

A method and system for formulating a color match

**Patentee:**

SABIC Innovative Plastics IP B.V.

**Opponent:**

RÖSSIG, Rolf

**Headword:**

-

**Relevant legal provisions:**

-

**Relevant legal provisions (EPC 1973):**

EPC Art. 56

**Keyword:**

"Inventive step - claims 1, 5 (yes)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0351/08 - 3.4.02

**DECISION**  
of the Technical Board of Appeal 3.4.02  
of 8 September 2010

**Appellant:** RÖSSIG, Rolf  
(Opponent) Cuvilliésstrasse 14  
D-81679 München (DE)

**Representative:** -

**Respondent:** SABIC Innovative Plastics IP B.V.  
(Patent Proprietor) Plasticslaan 1  
NL-4612 PX Bergen op Zoom (NL)

**Representative:** Strehlke, Ingo Kurt  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
9 November 2007 concerning maintenance of  
European patent No. 0767362 in amended form.

**Composition of the Board:**

**Chairman:** A. G. Klein  
**Members:** M. Rayner  
B. Müller

## Summary of Facts and Submissions

I. The opponent appealed against the decision of the opposition division that, as amended during the opposition proceedings European Patent No. 767 362 (application number 96307246.7) meets the requirements of the Convention. The patent concerns formulating a colour match. The following documents, amongst others, have been referred to in the opposition and/or appeal proceedings:-

- D1 GB-A-2 192 455,
- E2 Principles of Color Technology, Fred W. Billmeyer, Chapter 4-6,
- E4 Color, Color Measurement and Colorant formulation in the Textile Industry, vol. 5, no. 9, September 1973, pages 47-55,
- E5 US-A-4 887 906.

During the opposition proceedings, independent claims 1 and 5, with the wording given in section VII below, were filed on 18 January 2005. In a communication attached to a summons to oral proceedings dated 12 February 2007, the opposition division observed, *inter alia*, that the main difference from the cited prior art was the provision of entering relative importance of colour match attributes, *i.e.* a kind of weighing of different factors.

II. The decision under appeal was given at the oral proceedings on 11 October 2007. Reasoning for the decision included the following.

(a) Article 123

The amended claims are admissible under Article 123(2) and (3) EPC 1973 since their subject-matter neither extends beyond the content of the application as filed nor extends the protection conferred by the European patent. With respect to the newly inserted feature of entering relative importance of colour match attributes a basis can be found in the passages mentioned by the proprietor (page 6, lines 25-30, page 9, lines. 21-32 and p. 10, lines. 1-13 as well as figure 7), further reference can also be made to page 5, lines 22-25 of the originally filed documents. Moreover, this feature clearly limits the scope of the claims.

(b) Article 54

The subject matter of the independent claims is novel since none of the prior art documents discloses subject matter having all the features of the claims. Concerning novelty with respect to document D1, the division considered this document to disclose a colour correction method wherein the computer searches a large data base of known and available color formulas to find the closest match. The colour values providing the closest match then point to an existing paint formulation which is used to provide a paint that is the closest match. This is then produced. However, D1 does not disclose a number of features, one of which is the relative importance of color attributes being entered and taken into account in the form of a merit function.

(c) Article 56

Starting from document D1 and combining its teaching with that of document E2, the claimed method is not obvious because neither document gives any hint of the relative importance of color attributes being entered and taken into account in the form of a merit function. Although one may consider that for the skilled colour matcher a factor such as cost and/or metamerism is always taken into consideration when making a match, there is no hint in document E2 or common general knowledge towards entering relative importance and particular use of a merit function at a specific point in the matching procedure in the way defined in the claims.

- III. The board appointed oral proceedings to hear the case.
- IV. The appellant requested that the patent be revoked, or, in the alternative, that the case be remitted to the first instance for examination of compliance with Article 123 EPC.
- V. Arguments including the following were advanced in support of the appeal.

Statement of Grounds for Appeal

In section 1.0 - General- of the reasons for the appeal, the appellant explained that in the patent in dispute, the pre-characterising portions of current (=geltend) claims 1 and 5 are taken to correspond to document D1. According to the characterising part of current claim 1, the method is further developed through features

denoted (a) to (c). The appellant submitted that the characterising features of claim 1 as well as claim 5 belong to the standard repertoire of the skilled person. In the second sentence of section 3.0, the appellant stated that the patent proprietor had only marginally amended the claims in the opposition proceedings and that the newly inserted features describe conventional measures in the art. Reference was made to page 131 and 136 of document E2 to show that consideration was given to economic aspects of colour matching. In section 4.0 - Conclusion (Fazit) - the appellant argued that the insertions into claims 1 and 5 relating to relative importance of colour match attributes make no contribution to patentability.

The appellant also filed four documents in support of the case advanced, two of which, namely documents E4 and E5, had been cited in the search report. So far as these documents are concerned, they showed that usable colour adaptations can take account of further factors.

(i) Admissibility of the Appeal

During the oral proceedings before the board, the appellant explained the appeal was focused on inventive step and that common sense and the knowledge of the skilled person should be applied while reading it. While the statement of grounds for appeal could have been prepared in a more palatable (mundgerecht) form, it was nevertheless clear from its content where defects in the decision under appeal existed. The statement of appeal was adapted to the decision, there was also extra information. A board of appeal is a review instance where inventive step should again be

reviewed. The amended features are located in the pre-characterising part of the claim and were routine in the art, thus not contributing to inventive step. The appeal was therefore admissible.

(ii) Documents filed with Statement of Grounds  
for Appeal

The reasoning in the decision of the opposition division was difficult to follow. The decision under appeal was, in fact, a surprise and this is why the further search for prior art took place thereafter. Nevertheless, no further documents were really necessary for the appeal case. Therefore, only to be on the safe side, had reference also been made to the four documents filed with the appeal.

The chairman observed during the oral proceedings that the claims under appeal had been filed some two and three quarter years before the oral proceedings before the opposition division and had thus been known to the appellant well before those proceedings.

(iii) Amendments

Right at the end of the oral proceedings before the board, the appellant expressed surprise that features in the precharacterising part of the claim pertaining to the merit function were considered not to be known from document D1. As the features concerned were not present in the originally filed documents, there was also an infringement of Article 123 EPC.

In view of the significance of the added subject matter, the question of compliance with Article 123 EPC should be investigated by the first instance.

The chairman remarked during the oral proceedings that this question had been examined by the first instance. Moreover, with reference to Article 13 RPBA, requesting examination of this question right at the end of the oral proceedings was likely to be considered too late for admission before the board of appeal.

(iv) Patentability

In elaborating on the submissions in the statement of grounds for appeal, the appellant submitted that document D1 represents the acknowledged prior art and a manual adjustment of an unsatisfactory result has been known for 100 years. Plainly an unsatisfactory result has to be changed. So far as a merit function is concerned, reference can be made to page 1, line 82 et seq. of document D1. Reference can also be made to agreeing or disagreeing as set out on page 120 of document E2 together with manual correction as explained on page 124 and iteration according to the schematics on page 123. So far as features pertaining to the merit function are concerned, these features cannot be taken into account because they derive from an inadmissible amendment. Accordingly, the subject matter of the independent claims cannot be considered to involve an inventive step.

VI. The respondent (=patent proprietor) requested that the appeal be rejected as inadmissible or that the appeal be dismissed or, in the alternative, that the patent be



maintained on the basis of the claims of the auxiliary request filed with the letter of 9 April 2010.

Arguments including the following were advanced by the respondent.

(i) Admissibility of the Appeal

The appellant had referred to its opposition statement in the statement of grounds for appeal, aiming to incorporate the former by reference into its statement of grounds for appeal. A mere reference to its original grounds of opposition which have been discussed already three times and resulted all three times in a refusal of any of the grounds cannot be considered as proper grounds of appeal as required according to Article 108 EPC. The appeal should therefore be dismissed.

The respondent further elaborated during the oral proceedings on why the appeal was inadmissible for non-compliance with Article 108 EPC. An appeal has to be legally and factually complete and directly understandable by the other party and the board. From the decision, it was plain that the merit function is of decisive importance, yet this was not even dealt with in the statement of appeal. The division had identified the particular use of a merit function at a specific point in the matching procedure as something towards which there was no hint in the prior art. The appeal presented amounted to no more than a request to have a look at the file.

(ii) Documents filed with Statement of Grounds  
for Appeal

The appellant introduced new references intended to show that the additional characteristics of the amended claim are usual steps. However, the amended claims with additional characteristics had already been filed more than three years before. None of the references is highly relevant regarding novelty. This is not even claimed by the appellant. It is also not clearly argued how those references could be relevant for an argument regarding lack of inventive step. Further, the amended claims with the additional features had been filed on January 11, 2005 in the opposition proceedings. The oral proceedings in opposition were held on October 11, 2007, more than 30 months later. The appellant did not explain why he was not in a position to present the cited references earlier in opposition. It is therefore requested that the references not be admitted.

(iii) Amendments

The amendment relating to the merit function was dealt with in the decision under appeal in the context of Article 123 EPC. The support for the amendment was identified in the decision under appeal. The issue should not now be further discussed or remitted.

(iv) Patentability

Documents E4 and E5 were acknowledged by the respondent during the oral proceedings as in the procedure. The appellant's sole argument with respect to the four new references filed with the statement of grounds related

to the question of inventive step. The appellant sought to demonstrate that some of the characteristics introduced into the amended claim were known from several documents, yet had not made any effort at all to show that these characteristics were known in combination with the other features of claim 1.

So far as patentability is concerned, the appeal instance has to review the decision of the first instance, not conduct a fresh investigation of the case. The merit function is not part of the state of the art, in particular it is not in document D1 or E2. Reference can be made to the decision under appeal for its significance and the reasons therefor. The decision under appeal is correct in its conclusion on substantive patentability.

VII. The wording of the independent claims 1 and 5 as amended before the opposition division (=main request of the respondent) is as follows:

"1. A computer-implemented method for formulating a color match from a set of previously used color formulations, the method comprising the steps of:  
reading a color spectrum of a standard;  
entering relative importance of color match attributes which may include curve match, cost, loading level, opacity, color shift and metamerism;  
searching the set of previously used color formulations for a set of color formulas that approximates the color of the standard;  
determining from the set of color formulas a color formula that best matches the color of the standard based on a merit function score which takes into

account the relative importance of the color match attributes which may include curve match, cost, loading level, opacity, color shift and metamerism; and examining a test batch made from the color formula having the best match and determining the acceptability of the formula;

characterized by

adapting the color formula of the test batch to the color of the standard if the formula is unacceptable, the adapting including, at the choice of the operator, at least one of manual adjusting color loadings of the color formula, synthesizing a match with the color standard, or searching through the set of previously used color formulations until there is an acceptable match;

determining if the adapted color formula matches the color of the standard;

and

adapting the adapted color formula further until there is an acceptable match with the color of the standard.

5. A system for formulating a color match from a set of previously used color formulations, the system comprising:

a spectrophotometer for reading the color spectrum of a standard; and

a processor for formulating a color match from the set of previously used color formulations to the color spectrum of the standard read from the spectrophotometer,

the processor including means for entering relative importance of color match attributes which may include curve match, cost, loading level, opacity, color shift and metamerism, means for searching the set of

previously used color formulations for a set of color formulas that approximates the color of the standard; means for determining from the set of color formulas a color formula that best matches the color of the standard based on a merit function score which takes into account the relative importance of the color match attributes which may include curve match, cost, loading level, opacity, color shift and metamerism; and means for examining a test batch made from the color formula having the best match and determining the acceptability of the formula;

characterized by

means for adapting the color formula of the test batch to the color of the standard if the formula is unacceptable the adapting including, at the choice of the operator, at least one of manual adjusting color loadings of the color formula, synthesizing a match with the color standard, or searching through the set of previously used color formulations until there is an acceptable match; means for ascertaining if the adapted color formula matches the color of the standard; and means for adjusting the color formula further until there is an acceptable match with the color of the standard."

It is not necessary to give the wording of the independent claims according to the auxiliary request of the respondent for the reasons given in section 6 of the Reasons below.

VIII. At the end of the oral proceedings, the board gave its decision.

## **Reasons for the Decision**

1. Admissibility of Appeal
  - 1.1 Rule 99(2) EPC requires in the statement of grounds for appeal, an indication of the reasons for setting aside the decision under appeal and the facts and evidence upon which the appeal is based. Established case law on this issue can be seen in Case Law of the Boards of Appeal, 6th Edition, VII.E., 7.6, page 854 et seq. The arguments must be clearly and concisely presented to enable the board and any other party/parties to understand immediately why the decision under appeal is alleged to be incorrect without first having to make an investigation of their own.
  - 1.2 In the present case, the statement of grounds for appeal set out the structure of the appeal, which begins by referring to the current claim 1 in the context of the claims as granted, alleging features of the precharacterising part to be known from document D1 and features of the characterising part not to be inventive. The statement of appeal moves on to the allegation that the amendments made during the opposition proceedings amount to conventional measures in the art. The statement concludes that amended features relating to relative importance of colour match attributes make no contribution to patentability, referring in particular to additional references filed with the statement of the grounds of appeal which in particular would explicitly disclose the weighing of various factors. While it is true that no merit function is mentioned, the board nevertheless understands immediately that the appellant is

attempting to persuade it that the subject matter of the independent claims cannot be considered to involve an inventive step, contrary to the decision under appeal. This does not require the board or the respondent to make further investigations on their own to understand in which way the decision under appeal is contested by the appellant. The board is therefore convinced that the appeal is admissible.

2. Documents filed with Statement of Grounds for Appeal

2.1 Documents E4 and E5

2.1.1 The appellant cited the following passage in the third paragraph of the third column on page 51 of document E4

"Almost any variety of modifications to the basic procedure can be introduced into this system.  $\Delta X$ ,  $\Delta Y$ ,  $\Delta Z$  can be calculated in a few illuminants, a "metameric index" (25) obtained, and the formulation altered to obtain the optimum value. A minimum cost formula can also be calculated, fastness properties, compatibility with the system and affinity can also be built into the combined computer and information retrieval system. The complexity of the calculations for four or more dyes transcends simple comprehension, but may be within the capability of modern high-speed computers."

Moreover, the appellant cited the following passage in column 4, lines 34-42 of document E5

"The different formulations for a single reading are the result of various restrictions, such as the least expensive formulation, the formulation for the least

number of colorants, etc. Also, for each formulation, several different index numbers may also be outputted by the computer 34. Each index number may correspond to a different color difference unit (e.g. Cie Lab, metamerism, FMC II, Hunter) and be generated with a different algorithm."

2.1.2 In view of these disclosures, the appellant can be considered correct to argue that usable colour adaptations can take account of further factors. However, this argument cannot be considered to disagree with the approach of the respondent, namely "some of the additional characteristics of the amended claim were known from several documents". More significantly, it does not go beyond what was acknowledged by the opposition division, namely "one may consider that for the skilled colour matcher a factor such as cost and/or metamerism is always put into consideration when making a match". Consequently, the argument offers no credible challenge to the positive conclusion reached by the opposition division in relation to inventive step because it exhausts itself without disagreeing therewith and therefore can, in the board's view, be considered rather more to reaffirm that conclusion.

2.2 Fresh documents filed with and cited in the statement of grounds for appeal

2.2.1 The appellant declared during the oral proceedings in the appeal procedure that these documents were not necessary for its case.

2.2.2 Even had the appellant had submitted that the documents were relevant and necessary for its case, the board was



offered no convincing reason as to why they were not filed before the opposition division. As pointed out by the board, some two and three quarter years elapsed between the filing date of the claims and the oral proceedings before the opposition division. Moreover, the communication attached to the summons to those proceedings referred to the provision of entering relative importance of colour match attributes, i.e. a kind of weighing of different factors. Therefore, the submission that the appellant had been surprised by the decision, so that a further research after the decision was necessary, did not persuade that board that the fresh documents should be admitted.

2.2.3 For both of these reasons, the board was not in a position to admit the fresh documents into the procedure.

### 3. Amendments

3.1 The statement of grounds for appeal made no reference to the merit function at all, let alone a reference in the context of Article 123 EPC. In fact, the only reference to Article 123 EPC was in the context of the opposition against the claims as granted, which were stated to contain subject matter extending beyond the content of the application as filed (Art 100 (c) EPC combined with Article 123(3) EPC). The appellant referred to the text of Article 123(2) EPC but named Article 123(3) EPC.

3.2 Both Article 123(2) EPC and 123(3) EPC were dealt with in the decision under appeal, no inadmissible amendment having been found. The reference in the statement of

grounds for appeal cannot therefore be taken as challenging the decision of the opposition division in the context of Article 123 EPC. The board, in consequence, saw no reason for remittal to the opposition division for examination thereof.

- 3.3 Right at the end of the oral proceedings before the board, the appellant raised an objection under Article 123(2) EPC for added subject matter relating to the merit function. The appellant argued that it had not been realised until then that the merit function was judged significant by the opposition division for inventive step, but this realisation at the oral proceedings before the board made it necessary then to raise the objection even at that late stage, which should thus be admitted.
- 3.4 The approach of the appellant is not considered persuasive by the board because, as the respondent said, in the decision under appeal, in justifying its position on inventive step the opposition division had identified the particular use of a merit function at a specific point in the matching procedure as something towards which there was no hint in the prior art.
- 3.5 In view of the very late attempt to introduce this argument, the board therefore considered, in the light of Rule 13(3) RPBA, its introduction not to be permissible as the board and the other party could not be expected to deal therewith without adjournment of the oral proceedings.

4. Patentability

4.1 The appellant argued during the oral proceedings that since the merit function was added subject matter, it could not contribute to inventive step. Therefore, the subject matter of the independent claims could not be considered to involve an inventive step. However, since the appellant did not succeed in convincing the board of added subject matter, this argument fails ab initio as without foundation.

4.2 Since the statement of grounds for appeal does not mention any merit function at all and, even during the oral proceedings the appellant did not succeed in finding such in the prior art, the board has been offered no arguments at all pertaining thereto which might have detracted from the positive view of the opposition division on inventive step of the subject matter of the independent claims. In particular, the section of document D1 referred to by the appellant concerns colour matching, but does not teach entering relative importance and particular use of a merit function at a specific point in the matching procedure in the way defined in the independent claims. A similar conclusion can be drawn in relation to the iteration and flowcharts as well as the economic aspects mentioned in document E2. Documents E4 and E5 are not more relevant for the reasons given in section 2.1 of the Reasons above.

4.3 Accordingly, in the absence of persuasive submissions and since the purpose of the appeal in inter partes proceedings is not to occasion the board to re-examine the case using lines of argument generated by itself,

the board was not convinced that the position of the opposition division was in error.

5. The appeal therefore fails.
6. In this situation, it is not necessary to consider the auxiliary request of the respondent.

### **Order**

#### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar

The Chairman

M. Kiehl

A. G. Klein