

**Internal distribution code:**

- (A) [ ] Publication in OJ  
(B) [ ] To Chairmen and Members  
(C) [X] To Chairmen  
(D) [ ] No distribution

**Datasheet for the decision  
of 9 May 2007**

**Case Number:** T 0141/05 - 3.3.01

**Application Number:** 96119644.1

**Publication Number:** 0778321

**IPC:** C09D 11/00

**Language of the proceedings:** EN

**Title of invention:**

Ink set for ink jet recording and ink jet recording method  
using the same

**Patentee:**

SEIKO EPSON CORPORATION

**Opponents:**

Pelikan Produktions AG  
Alan J. Jones

**Headword:**

Ink set/SEIKO EPSON

**Relevant legal provisions:**

EPC Art. 84, 100(a) and (b), 111(1), 123(2)

**Keyword:**

"Main request, first and second auxiliary requests: Novelty  
(no)"

"Third auxiliary request: Novelty (yes)"

"Remittal to the first instance for further prosecution (yes)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0141/05 - 3.3.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.01  
of 9 May 2007

**Appellant:** SEIKO EPSON CORPORATION  
(Patent Proprietor) 4-1, Nishishinjuku 2-chome  
Shinjuku-ku  
Tokyo-to (JP)

**Representative:** Hammer, Jens  
Grünecker, Kinkeldey,  
Stockmair & Schwanhäusser  
Anwaltssozietät  
Maximilianstrasse 58  
D-80538 München (DE)

**Respondent (01):** Pelikan Produktions AG  
(Opponent 01) Leestrasse 1  
CH-8132 Egg (CH)

**Representative:** Hagemann, Heinrich  
Meissner, Bolte & Partner  
Postfach 86 03 29  
D-81630 München (DE)

**Respondent (02):** Alan J. Jones  
(Opponent 02) 43-45 Bloomsbury Square  
London WC1A 2RA (GB)

**Representative:** Kirsch, Susan Edith  
Carpmaels & Ransford  
43-45 Bloomsbury Square  
London WC1A 2RA (GB)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 25 November 2004  
revoking European patent No. 0778321 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** A. J. Nuss  
**Members:** C. M. Radke  
D. S. Rogers

## Summary of Facts and Submissions

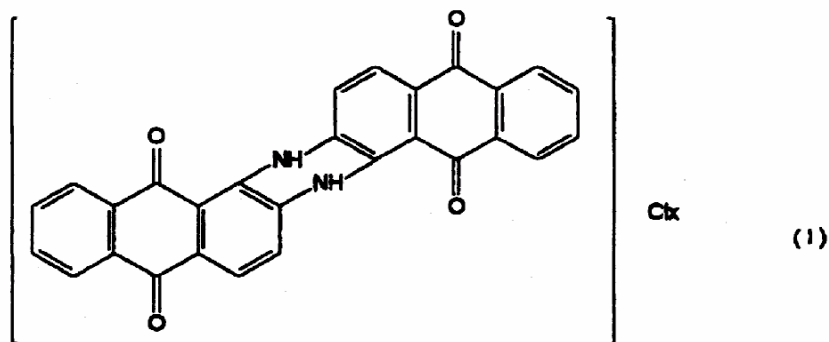
- I. This appeal lies from the decision of the opposition division by which the patent was revoked.
- II. The Opposition Division was of the opinion that grounds for opposition under Article 100 (a) and (b) EPC prejudiced the maintenance of the patent. In particular, the division considered that the subject-matter of the claims of the Main Request and of the Auxiliary Request then on file were not novel in view of the teaching of document (D9), especially in view of its example 18. Furthermore, the Opposition Division came to the conclusion that the patent in suit did not indicate how to obtain the yellow pigments of formula (III), thus not disclosing the subject-matter claimed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art.
- III. The following document was inter alia cited in the opposition or appeal procedure:  
  
(D9) EP-A-0 448 055 .
- IV. During the written stage of the appeal proceedings, the Appellant (Patent proprietor) filed several sets of amended claims in order to overcome the grounds for revocation of the patent. None of these claims were finally retained by the Appellant.
- V. Oral proceedings before the Board were held on 9 May 2007.

VI. At the oral proceedings, the Appellant defended the maintenance of the patent in suit on the following basis:

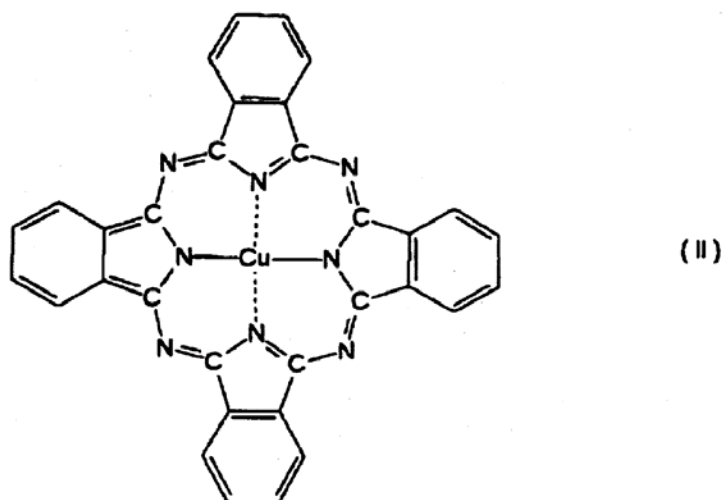
- claims 1 to 15 of the Main Request,
  - claims 1 to 15 of the First Auxiliary Request,
  - claims 1 to 13 of the Second Auxiliary Request,
  - claims 1 to 12 of the Third Auxiliary Request,
- all submitted during the oral proceedings on 9 May 2007.

Claim 1 of the **Main Request** reads as follows:

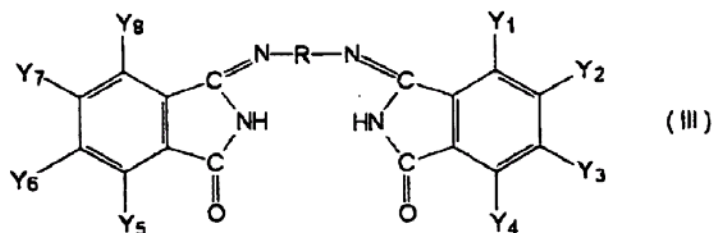
"An ink set for ink jet recording, comprising a cyan ink composition, a magenta ink composition, and a yellow ink composition,  
the cyan ink composition comprising a pigment represented by the following formula (I):



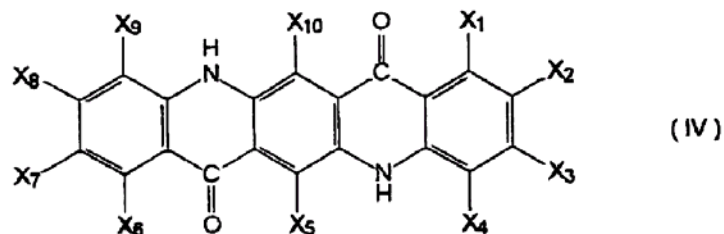
wherein x is in integer of 0 to 3; or,  
a pigment represented by the following formula (II):



or a mixture of the pigment represented by the formula (I) and the pigment represented by the formula (II),  
 the yellow ink composition comprising a pigment represented by the following formula (III):



wherein  $Y_1$  to  $Y_8$  each independently represent a chlorine or hydrogen atom and R represents o-phenylene or 2,6-xyllyl, or C.I. Pigment Yellow 74, 138, 150 or 180,  
 the magenta ink composition comprising a pigment represented by the following formula (IV):



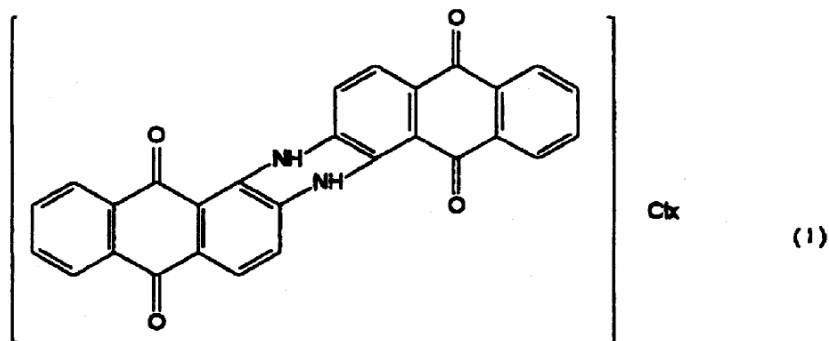
wherein  $X_1$  to  $X_{10}$  each independently represent a hydrogen or chlorine atom or a methyl group,  
 wherein the pigment concentration is not more than 6% by weight for all the ink compositions and the ratio of

the pigment concentration (% by weight) of the cyan ink composition to the pigment concentration (% by weight) of the magenta ink composition to the pigment concentration (% by weight) of the yellow ink composition is 1 : 1 to 2 : 1 to 3, wherein the concentration of the magenta pigment in the magenta ink composition and the concentration of the yellow pigment in the yellow ink composition each are higher than the concentration of the cyan pigment in the cyan ink composition."

Claims 1 of the **First and Second Auxiliary Requests** differ from the one of the Main Request in that the yellow ink composition is limited to one "comprising a pigment selected from C.I. Pigment Yellow 74, 138, 150 or 180".

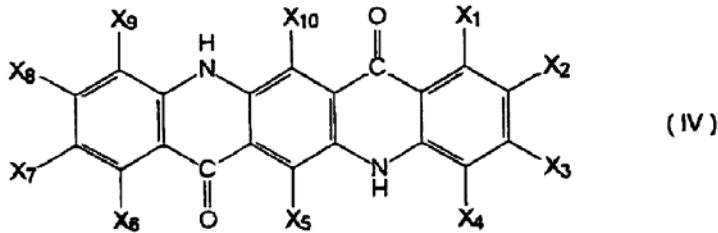
Claim 1 of the **Third Auxiliary Request** reads as follows:

"An ink set for ink jet recording, comprising a cyan ink composition, a magenta ink composition, and a yellow ink composition, the cyan ink composition comprising a pigment represented by the following formula (I):



wherein x is an integer of 0 to 3; or,  
C.I. Pigment Blue 15:3;

or a mixture of the pigment represented by the formula (I) and C.I. Pigment Blue 15:3, the yellow ink composition comprising a pigment selected from C.I. Pigment Yellow 74, 138, 150 or 180, the magenta ink composition comprising a pigment represented by the following formula (IV):



wherein X<sub>1</sub> to X<sub>10</sub> each independently represent a hydrogen or chlorine atom or a methyl group, wherein the pigment concentration is not more than 6% by weight for all the ink compositions and the ratio of the pigment concentration (% by weight) of the cyan ink composition to the pigment concentration (% by weight) of the magenta ink composition to the pigment concentration (% by weight) of the yellow ink composition is 1 : 1 to 2 : 1 to 3, wherein the concentration of the magenta pigment in the magenta ink composition and the concentration of the yellow pigment in the yellow ink composition each are higher than the concentration of the cyan pigment in the cyan ink composition."

VII. The Appellant argued that an ink set was to be considered as a combination of the three inks assembled together, e.g. in cartridges or in a printer. The subject-matter of the claims of all the Requests was novel as document (D9), even in example 18, did not disclose such a combination of inks.

In addition, the Appellant argued that document (D9) did not disclose a cyan ink composition as defined in claim 1 of the Third Auxiliary Request, i.e. one containing a pigment of formula (I) and/or C. I. Pigment Blue 15:3.

VIII. The Respondents (1) and (2) (Opponents (1) and (2)) argued that the patent in suit defined the term "ink set" merely as an aggregate of cyan, yellow and magenta inks. Example 18 of document (D9) disclosed such an aggregate of inks which deprived the subject-matter of claims 1 of the Main Request and of the First and Second Auxiliary Requests of novelty.

During the oral proceedings before the Board, the Respondents considered the subject-matter of the claims of the Third Auxiliary Request to be novel and did not maintain their objections under Articles 84 and 100(b) EPC against this Request. However, Respondent (1) requested not to admit this request as being filed late whereas Respondent (2) argued that claim 1 of this Request was objectionable under Article 123(2) EPC as the combination of the specific cyan, yellow and magenta inks defined therein was disclosed in the application as originally filed.

In addition to that, the Respondents considered the subject-matter of the claims not to be based on an inventive step.

IX. The Appellant requested that the decision under appeal be set aside and that the patent be maintained upon the basis of the Main Request or upon the basis of any of the First, Second or Third Auxiliary Requests submitted



during the oral proceedings before the Board (see point VI above).

The Respondents requested that the appeal be dismissed. The Respondent (2) requested, in addition, that if the Board decided that the patent met the remaining requirements of the EPC, the case be remitted to the first instance for assessing inventive step.

- X. At the end of the oral proceedings the decision of the Board was announced.

## **Reasons for the Decision**

1. The appeal is admissible.
2. *Main Request, First and Second Auxiliary Requests*
  - 2.1 Article 123 (2) and (3) EPC

The Respondents did not object to these Requests under Article 123 EPC. The Board has verified that the requirements set by this Article are indeed met. In view of the outcome on the issue of novelty for all three requests (see below), it is not necessary to give detailed reasons for considering that the amendments made are allowable.

- 2.2 Novelty

The application as originally filed defines the term "ink set" as follows:

"The ink set according to the present invention basically comprises a cyan ink composition, a magenta ink composition, and a yellow ink composition, the cyan ink composition being the above cyan ink composition of the present invention."

(see page 14, lines 9 to 13).

There is no indication in the application as filed or in the patent in suit, including in the claims, that the inks, in order to be regarded as an ink set, have to meet any further requirements, such as the inks being supplied in separate cartridges, in one combined cartridge or in one package.

Hence, the term "ink set" as used in the present claims is to be construed widely, i.e. as to include an aggregate comprising the three inks defined in the claims.

Document (D9) discloses in example 18 inks each of which contains a single pigment, i.e. Pigment Yellow-74, Pigment Red-122, Pigment Blue-15 or carbon black. The Board sees no reason for not considering these inks as an aggregate of inks and hence as an ink set.

These inks are suitable for ink jet recording (see (D9), page 4, lines 1 and 2).

Pigment Yellow-74 is one of the pigments cited in present claims 1 as a constituent of the yellow ink composition.

Pigment Red-122 is a pigment represented by formula (IV) of present claim 1 as is evident from claim 7 of the patent in suit as granted.

Pigment Blue-15 is the  $\alpha$ -modification of copper phthalocyanine, i.e. a pigment represented by formula (II) of present claims 1 (see the bottom paragraph of page 1 of Appellant's letter dated 4 May 2007 and the Enclosure A to this letter).

Moreover, it was not contested that the ink set disclosed in example 18 of document (D9) also meets the remaining requirements of present claims 1, i.e. the ones concerning the pigment concentrations (see present claims 1 starting from the words "wherein the pigment concentration ..." to the end of claims 1; cf. document (D9), page 17, line 47 to page 18, line 33).

Consequently, the subject-matter of claims 1 of the Main Request, the First and Second Auxiliary Requests is not novel.

Since the Board can only decide on a request as a whole, said lack of novelty has the consequence that the Main Request, and the First and Second Auxiliary Requests are rejected.

3. *Third Auxiliary Request*

3.1 Respondent (1) requested to reject this request as he considered it not reasonable to admit such amendments to the claims at such a late stage in the procedure.

The present claims only differ from the ones of the second auxiliary request filed with the letter dated 1 April 2005 stating the grounds for appeal, in that the subject-matter of claim 1 and dependent claim 3 has been combined and the remaining claims renumbered.

Apart from that, it has to be noted that the subject-matter of said claim 3 corresponds to that of claim 3 as granted.

So, the amendments are within the framework of the claims filed with the grounds for appeal.

Moreover, the claims of the Third Auxiliary Request are identical with claims 1 to 12 of the set of claims named "3. AUX. REQUEST" filed with the letter dated 5 April 2007, i.e. more than one month prior to the date of the oral proceedings before the Board.

Hence, the Board does not see why the Respondents could not be expected to comment on the present claims.

Therefore, the Board admits these claims in to the proceedings.

### 3.2 Article 123 (2) and (3) EPC

#### 3.2.1 Present claim 1 is based on claims 12, 1, 3, 6, 13, 18 and 17 as originally filed.

As far as the selection of the pigments for the ink set is concerned, the following applies:

Original claim 12 discloses an ink set comprising a cyan, a magenta and a yellow ink composition.

The broadest definitions of the pigments that may be used in these three ink compositions are given in original claim 1 for the cyan, in original claim 6 for the yellow, and in original claim 13 for the magenta ink composition.

In present claim 1 these definitions are limited only in that

- the cyan pigment of formula (II) has been restricted to C.I. Pigment Blue 15:3, i.e. to the only specific example of a pigment of formula (II) disclosed in the application as originally filed (see page 7, lines 5-6 and claim 3), and
- formula (III) has been deleted from the definition of the pigments that may be used in the yellow ink composition.

This limitation merely restricts the pigments of formula (II) to be used in the cyan ink composition and the pigments to be used in the yellow ink composition to those disclosed in the application as originally filed as being listed in the "Color Index" (C.I.), namely to C.I. Pigment Blue 15:3 and to C.I. Pigments Yellow 74, 138, 150 and 180. The "Color Index" is a non-proprietary industry standard for pigments and pigments classified in this index are clearly available to the public (see point 3.3 below).

Hence, the combination of pigments indicated in present claim 1 is directly and unambiguously derivable from the application as filed.

3.2.2 Present claims 2 to 12 have a basis in original claims 2 (see present claim 2), 3 and 4 (see present claim 3), 14 and 15 (see present claims 4 and 5), 5, 9 and 16 (see present claim 6) and 21-26 (see present claims 7-12).

3.2.3 The present claims do not extend the scope of the claims as granted in that the amendments result in a restriction of the definition of the pigments and their concentrations in the respective inks.

3.2.4 Consequently, the amendments in the present claims do not contravene the requirements of Article 123 (2) and (3) EPC.

3.3 Article 100 (b) EPC

The opposition division based its objection under Article 100(b) EPC on the fact that the patent in suit did not disclose how pigments of formula (III) could be obtained (see point III of the reasons of the decision under appeal).

In the present claims, formula (III) has been deleted with the effect that this objection has no more basis.

The Respondents no longer raised, therefore, any objection under Article 100(b) EPC in respect of the Third Auxiliary Request. The Board shares the Respondents' view and is satisfied that the previous

objection under this ground for opposition no longer applies.

### 3.4 Novelty

#### 3.4.1 The Respondents conceded that the subject-matter of claim 1 is novel.

The only cyan pigment disclosed in Document (D9) is pigment Blue-15 which is the  $\alpha$ -modification of copper phthalocyanine, whereas C.I. Pigment Blue 15:3 referred to in present claim 1 is the  $\beta$ -modification of copper phthalocyanine (see the Appellant's letter dated 4 May 2007, the first paragraph on page 1 and Enclosure A). The Board thus concludes that the subject-matter of the present claim 1 differs from the teaching of document (D9) as it does not disclose a cyan ink composition comprising a pigment of formula (I) as defined in present claim 1 or C.I. Pigment Blue 15:3 or a mixture of a pigment of formula (I) and C.I. Pigment Blue 15:3.

The Board is also satisfied that the other documents cited in the opposition or appeal proceedings do not disclose the ink set as defined in present claim 1.

Therefore, the subject-matter of present claim 1 is novel.

#### 3.4.2 The same holds for the subject-matter of dependent claims 2 to 6, the subject-matter of claims 7 to 11 which is directed to a method for ink jet recording in which the ink set of claim 1 is employed, and to the subject-matter of claim 12 which is directed to the record printed by said method.

4. *Remittal to the first instance*

From the Board's conclusion that the subject-matter of claims 1-12 of the Third Auxiliary Request is novel and that grounds under Article 100(b) EPC do not prejudice the maintenance of the patent on that basis, it follows that the reasons for revoking the patent are now overcome.

Having so decided, the Board has, however, not taken a decision on the complete case.

As the opposition division has not yet ruled on the issue of inventive step, the Board considers it appropriate to exercise its discretion under Article 111(1) EPC and to remit the case to the first instance for further prosecution, thereby also allowing the respective request of Respondent (2) (see point IX above).



**Order**

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

1. The decision under appeal is set aside.
  
2. The case is remitted to the first instance for further prosecution upon the basis of claims 1 to 12 of the Third Auxiliary Request, dated 9 May 2007, submitted during the oral proceedings.

The Registrar:

The Chairman:

N. Maslin

A. J. Nuss