

Internal distribution code:

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

D E C I S I O N
of 16 March 2005

Case Number: T 1175/02 - 3.3.7

Application Number: 99116902.0

Publication Number: 0982432

IPC: D06P 5/00

Language of the proceedings: EN

Title of invention:
Method of dyeing plastic lenses

Applicant:
Nidek Co., Ltd.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56, 111(1)

Keyword:
"Inventive step (no) - main request, auxiliary requests 1
to 3"
"Remittal - auxiliary request 4"

Decisions cited:
T 0775/90

Catchword:
-



Case Number: T 1175/02 - 3.3.7

D E C I S I O N
of the Technical Board of Appeal 3.3.7
of 16 March 2005

Appellant:

Nidek Co., Ltd.
7-9, Sakae-cho
Gamagori-shi,
Aichi 443-0035 (JP)

Representative:

Prüfer, Lutz H. Dipl.-Phys.
PRÜFER & PARTNER GbR
Patentanwälte
Harthauser Strasse 25d
D-81545 München (DE)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 1 August 2002
refusing European application No. 99116902.0
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. E. Teschemacher
Members: G. Santavicca
B. J. M. Struif

Summary of Facts and Submissions

I. European patent application 99 116 902.0, filed on 26 August 1999 and claiming a first priority of 27 August 1998 based on application JP 10-241323, a second priority of 14 June 1999 based on application JP 11-166204 and a third priority of 16 June 1999 based on application 11-169173, contained the following independent claims:

"1. A method of dyeing a plastic lens, including:

a first step of printing a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A -50D) with a dyeing solvent by using a printer (5) electrically controlled, the dyeing solvent containing a dissolved or fine-grained dispersed sublimatable dye;

a second step of placing the print base body having the print area printed with the dyeing solvent in a position where the print area faces a plastic lens (14) to be dyed without contact therewith; and

a third step of heating the print base body in a vacuum to sublimate the dye of the print area and deposit the sublimated dye on the lens."

"5. A system for dyeing a plastic lens, including:

a printer (5) which is electrically controlled to print a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A -50D) with a dyeing solvent containing a dissolved or fine-grained dispersed sublimatable dye;

a deposition device (10 - 13, 15 - 18, 20 - 23) for heating the base body in a vacuum to sublimate the dye of the print area and deposit the sublimated dye on the lens (14) to be dyed, the lens being placed in a

position where the lens faces the print area printed on the base body without contact therewith."

II. Oral proceedings before the Examining Division were held on 4 February 2002. According to the minutes thereof, four requests were discussed: MR1, AR1, MR2 and AR2. Main request MR1 was not allowable under Articles 84 and 123(2) EPC. The claims of auxiliary request AR1 lacked clarity and the subject-matter of Claim 1 thereof lacked an inventive step having regard to document D1 (JP-A-01 277 814). The claims of main request MR2 were not clear and the subject-matter of Claim 1 thereof was not inventive either over D1. The claims of auxiliary request AR2 instead were allowable. Therefore, after deliberation, the Examining Division held that auxiliary request AR2, which was based on Claims 1 to 5 filed during the oral proceedings with a correspondingly amended description, was allowable.

On 1 March 2002, a communication under Rule 51(4) EPC based on auxiliary request AR2 was despatched to the applicants. Claim 1, the only independent claim, read as follows:

"1. A method of dyeing a plastic lens, including:

 a step of printing a print area (2, 32, 41-44) on a print base body (3, 33, 50A-50D) with an ink containing a dissolved or fine-grained dispersed sublimatable dye;

 a step of placing the print base body (3, 33, 50A-50D) having the print area (2, 32, 41-44) printed with the ink in a vacuum vapor-deposition transfer device (10) so that the print area (2, 32, 41-44) faces the

plastic lens (14) to be dyed without contact therewith;
and

a step of heating the print base body (3, 33, 50A-50D) under vacuum in the vapor-deposition transfer device (10), thereby sublimating the dye of the print area (2, 32, 41-44) to vapor-deposit the sublimated dye on the lens;

characterized by

a step of inputting information on desired dyeing color and density to a computer (PC) which stores and controls color data including dyeing color and density,

wherein the printing step includes printing the print area (2, 32, 41-44) on the print base body (3, 33, 50A-50D) with the ink by controlling a printer (5), the printer (5) being connected to the computer (PC) and supplied with a plurality of inks, based on the color data stored in and controlled by the computer (PC) and the information on the dyeing color and density input to the computer (PC), and

wherein the inputting step includes inputting data on gradient patterns to the computer, and the printing step includes printing a print area (41, 43) with a density gradient."

III. In their response to the communication under Rule 51(4) EPC, the applicants enclosed amended claims 1 to 6 and asked the Examining Division to reconsider their position (letter dated 14 June 2002).

IV. In a decision posted on 1 August 2002, based on the amended claims filed with letter dated 14 June 2002, the Examining Division (ED) refused the application. According to the reasons:

- (a) The applicants had been explicitly informed that after the oral proceedings before the ED no further amendments to the claims would be consented, pursuant to Rule 86(3) EPC.
- (b) Amended Claims 1 to 6 enclosed in the letter dated 14 June 2002 corresponded in substance to Claims 1 to 6 of request AR1 discussed during the oral proceedings before the ED, with minor amendments to render their subject-matter clearer without altering their scope.
- (c) The subject-matter of claims 1 to 6 according to request AR1 discussed during the oral proceedings before the ED was not considered as allowable because the subject-matter of Claim 1 thereof lacked an inventive step having regard to D1, as detailed in the minutes of the oral proceedings.
- (d) Since the applicants had not given their consent to any other version of the application documents, there was no text approved by the applicants, as defined in Article 113(2) EPC, on which a patent could be granted.
- (e) Therefore, the application had to be refused.

V. On 6 September 2002, the applicants lodged an appeal against that decision and paid the fee for appeal on the same day. In their statement setting out the grounds of appeal, received on 13 November 2002, the appellants enclosed new claims as well as new pages of the description and new sheets of the drawings, replacing the request then on file.

In their response to a communication in preparation for the oral proceedings, in which the Board gave a preliminary view on the points to be discussed, the appellants enclosed a set of amended Claims 1 to 6 as the main request, replacing the main request enclosed in the statement setting out the grounds of appeal, as well as two auxiliary requests (letter dated 15 February 2005). Claim 1 according to the main request reads as follows:

"1. A method of dyeing a plastic lens, including:

 a first step including a step of inputting information on color and density of the ink forming a print area to be printed to a computer (PC) which stores and controls color data for preparation of color and density of an ink forming the print area to be printed, and a step of printing a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A - 50D) with an ink by controlling a printer (5), the printer (5) being connected to the computer (PC) and being supplied with a plurality of inks, based on the color data stored in and controlled by the computer (PC) and the information on the dyeing color and density input to the computer, the inks containing a dissolved or fine-grained dispersed sublimatable dye;

 a second step of placing the print base body (3, 33, 50A - 50D) having the print area (2, 32, 41 - 44) printed with the ink in a vacuum vapor-deposition transfer device (10) so that the print area faces the plastic lens (14) to be dyed without contact therewith; and

 a third step of heating the print base body (3, 33, 50A - 50D) under vacuum in the vapor-deposition

transfer device (10), thereby sublimating the dye of the print area (2, 32, 41-44) to vapor-deposit the sublimated dye on the lens."

- VI. Oral proceedings were held on 16 March 2005. The applicants filed three sets of amended claims as auxiliary requests 1 to 3, replacing the previous auxiliary requests on file. Claim 1 according to each of those auxiliary requests reads as follows (with respect to Claim 1 according to the main request, the further amendments are in bold):

Auxiliary request 1

"1. A method of dyeing a plastic lens, including:
a first step including a step of inputting information on color and density of the ink forming a print area to be printed to a computer (PC), **with an amount, color hue and density in the print area to be vapour-deposited by sublimating dye, which computer** stores and controls color data for preparation of color and density of an ink forming the print area to be printed, and a step of printing a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A - 50D) with an ink by controlling a printer (5), the printer (5) being connected to the computer (PC) and being supplied with a plurality of inks, based on the color data stored in and controlled by the computer (PC) and the information on the dyeing color and density input to the computer, the inks containing a dissolved or fine-grained dispersed sublimatable dye;
a second step of placing the print base body (3, 33, 50A - 50D) having the print area (2, 32, 41 - 44) printed with the ink in a vacuum vapor-deposition

transfer device (10) so that the print area faces the plastic lens (14) to be dyed without contact therewith; and

a third step of heating the print base body (3, 33, 50A - 50D) under vacuum in the vapor-deposition transfer device (10), thereby sublimating the dye of the print area (2, 32, 41 - 44) to vapor-deposit the sublimated dye on the lens."

Auxiliary request 2

"1. A method of dyeing a plastic lens, including:

a first step including a step of inputting information on color and density of the ink forming a print area to be printed to a computer (PC) which stores and controls color data for preparation of color and density of an ink forming the print area to be printed, and a step of printing a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A - 50D) **using an ink jet type printer (5)** with an ink by controlling **the printer (5)**, the printer (5) being connected to the computer (PC) and being supplied with a plurality of inks, based on the color data stored in and controlled by the computer (PC) and the information on the dyeing color and density input to the computer, the inks containing a dissolved or fine-grained dispersed sublimatable dye;

a second step of placing the print base body (3, 33, 50A - 50D) having the print area (2, 32, 41 - 44) printed with the ink in a vacuum vapor-deposition transfer device (10) so that the print area faces the plastic lens (14) to be dyed without contact therewith; and

a third step of heating the print base body (3, 33, 50A - 50D) under vacuum in the vapor-deposition transfer device (10), thereby sublimating the dye of the print area (2, 32, 41-44) to vapor-deposit the sublimated dye on the lens."

Auxiliary request 3

"1. A method of dyeing a plastic lens, including:

a first step including a step of inputting information on color and density of the ink forming a print area to be printed to a computer (PC) which stores and controls color data for preparation of color and density of an ink forming the print area to be printed, and a step of printing a print area (2, 32, 41 - 44) on a print base body (3, 33, 50A - 50D) with an ink by controlling a printer (5), the printer (5) being connected to the computer (PC) and being supplied with a plurality of inks, based on the color data stored in and controlled by the computer (PC) and the information on the dyeing color and density input to the computer, the inks containing a dissolved or fine-grained dispersed sublimatable dye;

a second step of placing the print base body (3, 33, 50A - 50D) having the print area (2, 32, 41 - 44) printed with the ink in a vacuum vapor-deposition transfer device (10) so that the print area faces the plastic lens (14) to be dyed without contact therewith;

a third step of heating the print base body (3, 33, 50A - 50D) under vacuum in the vapor-deposition transfer device (10), thereby sublimating the dye of the print area (2, 32, 41-44) to vapor-deposit the sublimated dye on the lens; **and**

a fourth step of further heating the lens (14) with the vapor-deposited dye under normal pressure up to a temperature below the lens resistible temperature to fix the dye on the lens."

VII. The appellants argued essentially as follows:

- (a) As to Article 123(2) EPC, Claim 1 according to the main request was based on Claims 1, 3, 5, 7 and 9 as filed, with further features taken from the description. The dependent claims had been amended consequentially. The claims according to the auxiliary requests were also based on the application as filed. In particular, the definition of the amount of colour in Claim 1 according to the first auxiliary request was based on the original description, page 17, lines 17 to 23, as well as on Example 1. Therefore, the amended claims complied with Article 123(2) EPC.
- (b) As regards clarity, the amendments essentially corresponded to those to the claims of request MR2 discussed during the oral proceedings before the ED, which had not been objected to for lack of clarity. Also, the independent claims had been drawn up in a one-part form, which was more appropriate.
- (c) As to inventive step of the subject-matter of Claim 1 according to the main request, the closest prior art was described in D1. The subject-matter of Claim 1 differed from the method of D1 as follows:

- (i) The desired dyeing colour and densities were inputted, stored and controlled in a computer, so that they could be reproduced as desired. There was no control in the process of D1.
- (ii) An ink was applied to a base by printing an area, contrary to D1 where a paper sheet had been coated by a roller.
- (iii) Printing meant the transfer of an ink to a predefined area to be printed, which exactly corresponded to the surface of the lens on which a color should be applied. Thus, that printing produced a precise coloured surface.
- (iv) The area was printed with any of the several inks available in a printer, which was connected to and controlled by the computer, to reproduce any colour and density based on the data as stored in the computer.

The roller coating of D1 was a very imprecise method of applying ink onto a substrate such as paper, which thus was not very well reproducible.

Hence, the problem to be solved was to provide a method of dyeing a plastic lens which was not only reliably reproducible, very flexible and capable of avoiding waste of ink, but also suitable to precisely reproduce particular printable forms.

The method defined in Claim 1 represented an effective solution to the problem.

D1 gave no hint to replace the roll coater method by a computer controlled printer nor at applying an ink only to a selected area on the substrate. In particular, D1 did not disclose that such a printed ink could then be advantageously sublimated onto a lens. Indeed, the applicants of D1 recognised some drawbacks of the method of D1 only after the present invention was made, as indicated in JP-A-2000-329 901.

Since computer controlled printer had been known long time before the present application and had never been used for the claimed purpose, the argument that it was obvious, ten years after the publication of D1, to use computer controlled printers was not convincing.

Furthermore, the claimed process was not a mere automation of the manual process disclosed by D1, but a breakthrough in the art concerned, whereby every particular of the area to be sublimated was designed, stored and controlled before and during any reproduction thereof.

The further documents on file gave no hint toward the claimed solution, which consequently was not obvious.

- (d) As regards *auxiliary request 1*, the input step in Claim 1 not only concerned the data of color hue and density but also that of the amount of the color. This further feature was not suggested either in D1.

- (e) *Auxiliary request 2* concerned the use of an ink jet printer for printing the area on the paper sheet. That kind of printer was not only very cheap but also permitted to avoid the use of a separate drying step, as in the method of D1. It could not be expected from D1 that ink jet printers were suitable and advantageous substitutes for roller coaters, for preparing surfaces of sublimatable dyes to be transferred onto plastic lenses.

- (f) As regards *auxiliary request 3*, a colour fixing step separate from the transfer step was carried out, which could be conducted everywhere, not necessarily in the oven where the transfer took place. This step permitted the prevention of resublimation of the colour transferred onto the plastic lens, which resublimation was a drawback of the method of D1.

VIII. The appellants requested that the decision under appeal be set aside and that a patent be granted on the basis of the set of claims 1 to 6 according to the main request as submitted by letter dated 15 February 2005, alternatively, on the basis of one of the auxiliary requests 1 to 3 as submitted at the oral proceedings before the Board, or with the claims, description and drawings annexed to the communication under Rule 51(4) EPC dated 1 March 2002 (*Auxiliary request 4*).

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*
 - 2.1 Compared to Claim 1 as filed, Claim 1 according to each of the main request and auxiliary requests 1 to 3 contains a number of amendments. In their letter dated 15 February 2005, and during the oral proceedings, the applicants indicated the basis for the amendments in the application as filed. Since the main request and auxiliary requests 1 to 3 fail for lack of inventive step of the subject-matter of Claim 1 (points 4 to 7, *infra*), the question whether the amendments are allowable can be left undecided in the present case.

3. *Novelty*
 - 3.1 Novelty was not objected to in the impugned decision. The Board has no reasons to take a different position. The distinctions of the claimed subject-matter from the subject-matter of D1 will become apparent from the discussion on inventive step.

Main request

4. *Inventive step*
 - 4.1 Methods of dyeing plastic lenses are known, in particular from D1, which discloses a method for colouring of a plastic lens, in which a plastic lens is faced against a substrate with a sublimable dye applied onto a surface in a vacuum atmosphere by a non-contact

means; said sublimate dye is sublimated by heating said substrate so as to form a colouring layer onto the surface of said plastic lens (Claim).

4.2 The method of D1 aims at offering dyeing means for a stable plastic lens with uniform dyeing performance and excellent colour reproductive performance (page 3, last paragraph).

4.3 To achieve that aim, D1 teaches the following measures (pages 4 to 6):

- (a) The dye to be applied onto the substrate is preferably a dispersion dye that can be sublimated.
- (b) An ink is prepared by mixing a mixture of said dispersion dye, a binder such as a water-soluble acrylic resin and a solvent such as water.
- (c) The ink is applied onto a substrate such as a paper sheet so as to obtain a dye applied substrate.
- (d) The dyed surface of said dye applied substrate and a surface of a plastic lens to be dyed face each other in a non-contact state.
- (e) The distance between said plastic lens and said dye applied substrate is determined by the colouring period, the heating temperature of the plastic lens and the sublimate dye, the vacuum level, the colour concentration of the plastic lens to be dyed.
- (f) A distance between 1 mm to 1000 mm is preferred.
- (g) The colouring is applied in a vacuum atmosphere such as 10 mmHg or less.
- (h) The temperature is maintained in the range of 50 to 160°C.

- (i) The dyeing period is generally between 10 s and 100 minutes.

4.4 According to Embodiment 1 of D1, a sublimate dye substrate is obtained by applying a dyeing mixture onto the entire surface of a paper substrate by using a roll coater. The coloration of the lens is carried out in a vacuum transfer device. A suitable vacuum device (shown in Figure 1) contains the following items (page 7, line 2 to page 8, penultimate paragraph):

- (a) A perforated metal sheet 1;
- (b) A card 2, to be positioned onto perforated metal sheet 1, on which a coated paper substrate is placed with its coated surface on the top, to ensure uniformity of heating of the dye;
- (c) a sheet 4, having perforated portions in a predetermined shape, placed onto the dyed substrate, to prevent an excessive sublimation of the dye;
- (d) a lens holding device 5 having, in relation to the shape of sheet 4, a shorter diameter on one of its sides and a larger diameter on the other side;
- (e) a heating device 7.

4.5 As exemplified in D1, a plastic lens can be coloured with an entirely uniform colouring concentration, even if said colouring process is repeated many times (page 8, second complete paragraph). Therefore, D1 aims at a method for colouring plastic lenses without any deformation of the lenses, whereby the lenses are uniformly coloured and the reproduction of that uniform colour is excellent.

- 4.6 According to the present application, the problem to be solved is to provide a dyeing method capable of facilitating preparation of dyes in desired density and also dyeing plastic lenses with a stable hue or tint in every works, and improving a working environment thereof (page 2, lines 14 to 19). According to the appellants, this problem is solved by a method having the features of Claim 1.
- 4.7 The present application does not contain any comparative examples showing any technical advantage of the claimed method over the method of D1.
- 4.8 As regards improvement of the working environment, D1 discloses a dyeing method capable of dyeing a plastic lens with a uniform, stable hue or tint in every work, in which a dispersed sublimatable dye is transferred to the lens in a vacuum heating device (Figure 1 of D1), which is closed and improves the working environment as apparent from the present application. Thus, the problems of dyeing a plastic lens with a stable hue or tint in every works, and improving a working environment thereof as stated in the application as filed (page 6, lines 16 to 19; page 17, lines 13 to 15), are already solved by the method of D1, which uses a vacuum heating device similar to that used in the claimed process.

Hence, the problem to be solved over D1 is to provide a method for dyeing plastic lenses that is capable of facilitating preparation of the dyes in desired density and application thereof to a substrate.

According to the examples of the application under examination that problem has been effectively solved by a method having the features of Claim 1.

4.9 It remains to be decided whether or not the claimed solution is made obvious.

4.9.1 As regards facilitating preparation of dyes in desired density and application thereof to a substrate, the features which actually distinguish the method as claimed from the method of D1 are those defined in the first step of Claim 1 according to the main request.

These distinguishing features essentially relate to: inputting information on colour and density of an ink for an area to be printed on a substrate to a computer, which stores and controls the colour data for preparation of colour and density of an ink to be printed on the selected area.

According to the application as filed (compare page 8, lines 9 to 27): commercially available dispersible dyes, i.e. red, blue, yellow and black, are used for making the inks; the inks are filled in cartridges suitable for ink jet printers, also commercially available; the computer is a commercially available personal computer, which contains a drawing software or computer colour matching (CCM), to handle the production of a desired hue and density of the ink to be printed by the printer connected to the personal computer. The above equipment and software permit a digital control so that prints in identical color density can be output as many times as desired. The substrate on which the ink is printed is a standard, commercially available A4 white paper. In the

description as well as in the examples no particular software is mentioned. During the oral proceedings, the applicants confirmed that the dyes, equipment and software were all commercially available.

Hence, it is not apparent from the disclosure that any particular selection of any of the above commercially available equipment and software is necessary for achieving the objects of the claimed subject-matter.

4.9.2 It follows from the above that the distinguishing features of Claim 1 over the method of D1 merely relate to an automation of the steps of preparing the dyes and the print area of the method of D1, whereby the automation is provided by the use of commercially available drawing packages or software provided in commercially available personal computers, connected to commercially available printers such as ink jet printers, provided with a plurality of commercially available inks, for the actual application of the desired ink colour onto a commercially available substrate such as A4 white paper.

4.9.3 It was not contested that any drawing software provided in a computer enables the creation of a print area on the screen and the reproduction thereof by printing onto a substrate. In particular, the software permits setting up a page grid, creating a layout of the print area, adding elements, transforming, arranging and formatting them, and preparing the final output. The number of shapes that can be produced is practically unlimited.

As regards computer colour matching (CCM), its function is to ensure that a colour on one medium (e.g. monitor) remains the same when converted to another medium (e.g. paper). In other words, the desired target of every colour matching is "what you see is what you get". In particular, if the final output is going to be produced on a colour printer, then there are several choices where uniform colours can be chosen from the palette or mixed to order, whatever is the mixing model (red, green, blue (RGB); hue, lightness, saturation (HLS); cyan, magenta, yellow, black (CMYK)).

The commercially available colour printers can work with a number of these models. Hence, once clicking a colour in a palette, its number is all the printer needs to know to mix up the desired ink, i.e. the necessary percentages of the primaries. And a computer thus ensures a comprehensive control over the printing process.

It was not contested either that all these items of information were available at the priority date of the application and were known to the skilled person (compare page 2, point 4.2, last sentence, of the minutes of the oral proceedings before the Examining Division).

- 4.9.4 The appellants argued that the skilled person did not know that sublimatable inks could be successfully used in colour printers nor could he expect that sublimation of an ink applied to a particular printed area was advantageous compared to the roller coating of the entire sheet exemplified in D1, which required the presence of a perforated plate to delimit the

sublimation to a desired area. In that respect it should be taken into account that no evidence of any prejudices in the art has been submitted. Nor can the mere fact that printers, computers and software were known long before the priority date of the present application contribute to inventive step.

4.9.5 From the above it follows that the distinguishing features of the method of Claim 1 do not lead to any unexpected results over the method of D1 and thus merely reside in automation of functions previously performed by an experienced human operator. This automation, however, merely corresponds to the general trend in technology (Case law of the Boards of Appeal of the EPO, 4th edition, 2001, point I.D.7.6.20.3, in particular T 775/90 of 24 June 1992). Hence, the method of Claim 1 is obvious and cannot involve an inventive step.

4.10 Therefore, the main request is not allowable.

Auxiliary request 1

5. Claim 1 according to *auxiliary request 1* contains the further amendment that the input data concern the amount, the colour hue and the density in the print area.

5.1 Based on the description as filed, that amendment is interpreted as follows:

5.1.1 Amount, colour hue and density data relate to the ink to be printed.

- 5.1.2 The color hue is the characteristic of the colour which is indicated by the words "red, yellow, blue, brown, etc." (page 18, lines 10 and 11), i.e. the particular tint of the selected dye.
- 5.1.3 The colour density describes the colour tone (page 8, line 22), which can be lighter or darker (page 11, line 5), i.e. more or less saturated, and is given in a percentage of a light-shield rate (page 18, line 12). Hence, the colour density results from the ratio between the tint and the achromatic components.
- 5.2 As regards the amount, reference is made to page 17, lines 17 to 19, as well as to Example 1. However, the statement on page 17 merely says that the amount is always controlled, which is typical for commercially available printers. According to Example 1, the amount merely relates to the ratio of the primary colours (red-blue-yellow, 2-1-3) to obtain the desired brown colour (page 18, line 11). This amount concerns common general knowledge, which can be input by the skilled person by merely selecting the colour in the palette of the drawing package.
- 5.3 Therefore, there is no basis in the application as filed for interpreting the amendment as a further input of an amount of ink to be applied to the print area, which might be related to a thickness of the colour layer applied onto the area and thus to a sublimatable amount (Article 123(2) EPC). In this respect, the applicants have not shown either which commercially available printers permit to select and control from a computer the thickness of the ink applied to the print area.

5.4 But even if the amendment to an input of the amount of the ink was related to the thickness of the colour layer, the problem to be solved would not change, since no unexpected technical effect has been shown in that respect (compare point 4.7, *supra*). Moreover, the method of D1 allows a control of the thickness of the coating. Hence, the subject-matter of Claim 1 according to the *auxiliary request 1*, for the reasons given under points 4, *supra*, does not involve an inventive step either.

5.5 Therefore, *auxiliary request 1* is not allowable.

Auxiliary request 2

6. Claim 1 according to *auxiliary request 2* is further restricted to the use of an ink jet printer.

6.1 The use of an ink jet printer is mentioned in the description of the application as filed (page 8, line 14) (Article 123(2) EPC).

6.2 In view of that amendment, the problem to be solved does not change either (compare point 4.7, *supra*).

6.3 As regards obviousness, the Board is of the opinion that the choice of an ink jet printer, the cheapest available printer, is the first choice that a skilled person aiming at automating the method of D1 would make, in the absence of any disincentive of course.

6.4 The allegation of the appellants that the skilled person would not have expected that sublimatable dyes

could be printed with an ink jet printer has not been supported by any evidence (compare point 4.9.4, *supra*).

6.5 For the reasons as given under point 4, *supra*, the subject-matter of Claim 1 according to *auxiliary request 2* does also not involve an inventive step.

6.6 Therefore, *auxiliary request 2* is not allowable either.

Auxiliary request 3

7. The method of Claim 1 according to *auxiliary request 3* includes a fourth step, in which the lens with the vapour-deposited dye is further heated under normal pressure up to a temperature below the lens resistible temperature to fix the dye on the lens.

7.1 This step can be conducted outside the vacuum transfer device, e.g. in an oven (35) (Figure 6; page 14, lines 8 to 20). Its purpose is to prevent that the sublimated dye deposited on the lens might come off.

7.2 The appellants had argued that this step prevented the sublimation of the colour already deposited on the plastic lens, which was a drawback of the method of D1.

7.3 Thus, a further problem should be solved, which has no link to the problem stated above (compare point 4.8, *supra*) in connection with the previous requests.

7.4 It has not been shown that such a problem would be solved by the additional step of Claim 1. Although the examples of the present application include such a further step to fix the dye on the lens, the

application under examination does not include any comparison between a lens coloured according to the method of D1 and one which is just taken out from the vacuum transfer device and left at room temperature and normal pressure. In particular the deposition time in D1 (10 seconds to 100 minutes, page 6, line 4; 5 minutes, example, page 8) is less than or comparable to the deposition time used in the claimed process (30 to 60 minutes, page 14, lines 19 to 20; 30 minutes, Example 1). Hence, it cannot be excluded that the claimed further step merely serves the purpose of accelerating the fixation for a more economic production. It has not been shown either that the alleged additional problem of preventing sublimation of the dye already deposited on the plastic lens in the vacuum transfer device has been solved. Consequently, the additional problem to be solved over D1 is to provide an alternative method.

7.5 As regards obviousness, the features of the fourth step of Claim 1 include any further drying of the lens at any temperature below the lens resistible temperature, such as any drying at room temperature, under normal pressure, of a lens taken out from a vacuum transfer device. Such a fixation of the dye at room temperature and normal pressure also happens to a lens of D1 after it has been taken out of the vacuum transfer device of D1. Therefore, the method of Claim 1 according to *auxiliary request 3* is also obvious over the method of D1.

7.6 It follows from the above that *auxiliary request 3* is not allowable either.

Auxiliary request 4

8. *Auxiliary request 4* corresponds to the set of claims attached to the communication under Rule 51(4) EPC. The Board has no reasons to deviate from the position taken by the Examining Division in that respect and to restart an examination of that request on its own motion.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution on the basis of auxiliary request 4.

The Registrar:

The Chairman:

C. Eickhoff

R. Teschemacher