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D E C I S I O N
of 4 October 2000

Case Number: T 1067/97 - 3.4.2

Application Number: 89306131.7

Publication Number: 0347245

IPC: G03F 7/30

Language of the proceedings: EN

Title of invention:

Method for development processing of presensitized plates

Patentee:

FUJI PHOTO FILM CO., LTD

Opponent:

Agfa-Gevaert N.V.

Headword:

-

Relevant legal provisions:

EPC Art. 56, 84, 114(2), 123(2)

Keyword:

"Amendments - inadmissible extraction of isolated feature
(main request)"

"Late filed request - exercise of discretion"

"Inventive step - obvious combination of known features (first
and second auxiliary requests)"

Decisions cited:

T 0063/86, T 0633/97

Catchword:

-



Case Number: T 1067/97 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 4 October 2000

Appellant: FUJI PHOTO FILM CO., LTD.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 18 August 1997
revoking European patent No. 0 347 245 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: S. V. Steinbrener
B. J. Schachenmann

Summary of Facts and Submissions

- I. The appellant (= proprietor of the patent) lodged an appeal against the decision of the Opposition Division revoking European patent No. 0 347 245.
- II. An opposition had been filed by the respondent (= opponent) against the patent as a whole and based on Article 100(a) and (c) EPC since the subject-matter of the patent in suit allegedly extended beyond the content of the application as filed and did not involve an inventive step. The opposition referred to the following documents (using the referencing of the Opposition Division):

D1: US-A-4 259 434

D2: EP-A-0 095 416

D3: EP-B-0 080 659

D4: FR-A-1 081 179, and

D5: GB-A-1 495 745.

The opponent's objection under Article 100(c) EPC having no longer been maintained at oral proceedings before the first instance, the Opposition Division held that the grounds for opposition mentioned in Article 100(a) EPC prejudiced the maintenance of the contested patent in that the subject-matter of claim 1 as granted was not inventive with respect to the prior art disclosed in documents D1 and D2.

- III. In accordance with the parties' auxiliary requests,

oral proceedings were appointed by the summons dated 4 August 2000.

In a subsequent communication dated 6 September 2000, the Board expressed its doubts as to whether amended claim 1 filed with the statement of grounds of appeal could be considered admissible under Article 123(2) EPC since it appeared from the original application documents that the newly added feature concerning the $[\text{SiO}_2]/[\text{M}_2\text{O}]$ ratio of the developer had only been disclosed in combination with a specification of the SiO_2 concentration.

Moreover, the Board held the provisional view that document D1 constituted the most relevant prior art from which the subject-matter of amended claim 1 in substance only differed in that the automatic developing machine was of dipping type and was provided with a plate for reducing contact between air and the surface of the alkaline developer in the tank, said plate shielding at least 60% of the whole developer-air interface. Said differences seemed to relate to the prevention of carbon dioxide absorption causing deterioration of the developer properties - an effect which was already mentioned in document D1.

Since automatic developing machines of the dipping type having shielding plates for preventing developer-air contact were known from the remaining prior art, in particular from document D2, the discussion at the oral proceedings, should focus on whether or not the use of such alternative developing machines and the specification of the amount of shielding required was obvious for a skilled person in view of the problem posed with respect to the closest prior art.

- IV. As a reaction to that communication, the appellant filed an auxiliary request with its letter dated 28 September 2000, claim 1 of the auxiliary request having been more restricted. Complete sets of patent documents in accordance with the main and auxiliary requests were then submitted with the appellant's letter of 29 September 2000.
- V. Oral proceedings took place on 4 October 2000. During the oral proceedings, the appellant submitted a further auxiliary request. At the end of the oral proceedings, the Board's decision was given.
- VI. The appellant requested that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims and description pages filed as main and auxiliary requests with the letter dated 29 September 2000, or on the basis of the second auxiliary request filed at the oral proceedings.
- VII. The respondent requested that the appeal be dismissed.
- VIII. The wording of claim 1 according to the respective requests on file at the time of the present decision reads as follows:

Main Request

"1. A method for development processing a presensitised plate for use in making a lithographic printing plate comprising the steps of:

- (i) image wise exposing to light a presensitised plate comprising an aluminum plate having an anodized layer of 0.5 to 6 g/m² and a lithographically suitable photosensitive layer on the anodized layer; and
- (ii) development processing the exposed presensitised

plate at a temperature of 28 to 40°C utilizing a conveying type automatic developing machine while conveying and dipping the plate in an alkaline developer having a pH of not less than 12 charged in a tank, and while appropriately supplying a replenisher to the tank, the machine being provided with a plate for reducing contact between air and a surface of the alkaline developer in the tank so as to remove non-image areas of the photosensitive layer and the plate providing a rate of shielding of the developer surface for preventing the contact between the developer and air which is not less than 60% of the whole developer-air interface; wherein the developer and the replenisher are aqueous solutions of an alkali metal silicate, where the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the developer ranges from 1.0 to 1.5, and the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the replenisher ranges from 0.6 to 1.5, wherein $[\text{SiO}_2]$ is the molar concentration of SiO_2 and $[\text{M}_2\text{O}]$ is the molar concentration of an alkali metal oxide M_2O ."

First Auxiliary Request

"1. A method for development processing a presensitised plate for use in making a lithographic printing plate comprising the steps of:

- (i) image wise exposing to light a presensitised plate comprising an aluminum plate having an anodized layer of 0.5 to 6 g/m² and a lithographically suitable photosensitive layer on the anodized layer; and
- (ii) development processing the exposed presensitised plate at a temperature of 28 to 40°C utilizing a conveying type automatic developing machine while conveying and dipping the plate in an alkaline developer having a pH of not less than 12 charged in a tank, and while appropriately supplying a replenisher to the tank, the machine being provided with a plate

for reducing contact between air and a surface of the alkaline developer in the tank so as to remove non-image areas of the photosensitive layer and the plate providing a rate of shielding of the developer surface for preventing the contact between the developer and air which is not less than 60% of the whole developer-air interface; wherein the developer and the replenisher are aqueous solutions of an alkali metal silicate, where the developer has a concentration of SiO_2 of 1 to 4 % by weight and the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the developer ranges from 1.0 to 1.5 and the replenisher has an alkali strength equal to or more than that of the developer, and the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the replenisher ranges from 0.6 to 1.5, wherein $[\text{SiO}_2]$ is the molar concentration of SiO_2 and $[\text{M}_2\text{O}]$ is the molar concentration of an alkali metal oxide M_2O ."

Second Auxiliary Request

"1. A method for development processing a presensitised plate for use in making a lithographic printing plate comprising the steps of:

(i) image wise exposing to light a presensitised plate comprising an aluminum plate having an anodized layer of 0.5 to 6 g/m^2 and a lithographically suitable photosensitive layer on the anodized layer; and

(ii) development processing the exposed presensitised plate at a temperature of 28 to 40°C utilizing a conveying type automatic developing machine while conveying and dipping the plate in an alkaline developer having a pH of not less than 12 charged in a tank, and while appropriately supplying a replenisher to the tank, the machine being provided with a plate for reducing contact between air and a surface of the alkaline developer in the tank so as to remove non-image areas of the photosensitive layer and the plate

providing a rate of shielding of the developer surface for preventing the contact between the developer and air which is not less than 60% of the whole developer-air interface; wherein the developer and the replenisher are aqueous solutions of an alkali metal silicate, where the developer has a concentration of SiO_2 of 1 to 4 % by weight and the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the developer ranges from 1.0 to 1.5, and the ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the replenisher ranges from 0.6 to 1.5, wherein $[\text{SiO}_2]$ is the molar concentration of SiO_2 and $[\text{M}_2\text{O}]$ is the molar concentration of an alkali metal oxide M_2O ."

Identical claims 2 to 8 are appended to the main claims of the respective requests.

IX. The appellant's argument in support of its requests may be summarised as follows:

The main request must be considered to comply with Article 123(2) EPC since the SiO_2 concentration of the developer is a separate technical feature as can be seen from the optional nature of the analogue SiO_2 concentration given for the replenisher in the second paragraph on page 4 of the A-publication of the patent in suit. Although, in the following paragraph, the conjunction "and" combining the preferred $[\text{SiO}_2]/[\text{M}_2\text{O}]$ molar ratios of the developer with the preferred SiO_2 concentrations may point in a certain direction, it does not mean that both features are inherently linked together.

In any case, objections under Article 123(2) EPC are overcome by claim 1 of the first auxiliary request which has been amended to include the combination of

the above features. Since the additional feature of said claim concerning the alkali strength of the replenisher does not deal with any issues raised by the respondent, it may also be deleted as has been done in claim 1 of the second auxiliary request. As a direct reaction to the Board's communication, the auxiliary requests must be considered admissible. The amendments do not create difficulties to deal with, nor do they affect the arguments.

An objection under Article 84 EPC against claim 1 of the first auxiliary request should not be expected since the new wording directly quotes the description examined by the Examining Division. The term "alkali strength" in said additional feature paraphrases "pH-value". The presence of this feature in the claim does not mean that it is essential, but could be argued both ways: either that a skilled person would conventionally do this or that it would be associated with the preceding features.

In view of the general agreement that document D1 is the closest starting point, the crucial issue seems to be whether the claimed solution may be reached on the basis of common general knowledge or by considering a combination of patent documents in the presence of a pointer. Although claim 1 of D1 is not restricted to a spraying system, in accordance with the overall disclosure of D1 such a system must be considered essential. By merely assuming without any evidence that a dipping process was equivalent to a spraying process, the Opposition Division used the "common general knowledge" approach in the impugned decision. Said equivalence was, however, not conceded by the appellant's representative in the oral proceedings

before the first instance. In fact, the Division's assumption is wrong since both processes are different with respect to the amount of aluminium etching and the deposits observed.

Nor is there any pointer in the prior art to a modification of the spraying process. This also holds for the requirement of a small developer-air interface mentioned in D1, which cannot be seen to point to the use of a shielding plate. A skilled person would not change the invention of D1 completely, but only modify it. Although the claimed process and the process of D1 use the same developing systems, the side-issues are different in both cases. In view of the new problem of aluminium elution and the different deposits, a change in the set of developer parameters would be expected, and it is only by surprise that these are similar to the parameters disclosed in D1. The claimed solution is effective over the full range of the replenisher ratio, i.e. including a ratio of 0.6, in that an improvement is achieved.

Moreover, the claimed subject-matter cannot be reached by a simple exchange of the application method (i.e. spraying by dipping) since further modifications would have to be made including the provision of a shielding plate and the specification of the percentage of shielding. In this respect, no conclusions are derivable from document D2, nor from documents D4 and D5 which are less relevant since they do not relate to development processing of printing plates. Having regard to the use of a shielding plate, document D3 seems to be the most pertinent prior art in that it describes a practical realisation in Figure 2 showing a lot of equipment in the tank, as e.g. rolls and brushes

below and above of the surface. Again, no percentage of shielding is specified. Even when accepting the assumption of the impugned decision that a skilled person would aim at the highest possible percentage, it would be very difficult to achieve a percentage of 60% or more for the developer of D3. The claimed percentage may have been found by trial and error, which however does not mean that it is a routine development. As can be seen from the appellant's tests submitted before the first instance, more than 80% shielding is not possible in a real embodiment so that the almost 100% coverage shown in D2 can only be considered to be schematic.

Furthermore, these tests show a sharp decrease in the amount of replenisher necessary at a shielding of 60%, and the fact that a further continuous decrease is achieved above 60% cannot detract from the threshold value to involve an inventive step. However, in order to arrive at such a high percentage of shielding, steps must be taken with respect to the apparatus design.

Finally, although not specified in the claim for practical considerations with respect to possible infringements, the method according to the patent in suit solves the further problem of high speed developing by providing high temperatures. Even if there is an overlap of the temperature ranges provided in the contested patent and D1, there is no pointer to high speed developing in D1, and the prior art developing times are considerably longer. No specific temperature values are mentioned for the examples of D1 so that these examples must have been operated at room temperature, i.e. not in the overlap region.

Having regard to the auxiliary requests, the same

argumentation holds with respect to inventive step.

X. The respondent argued as follows:

The subject-matter of claim 1 of the main request offends against Article 123(2) EPC since the [SiO₂]/[M₂O] ratios of the developer have originally only been disclosed in combination with the SiO₂ concentrations. Hence, there is no basis for regarding these features separately.

The first auxiliary request must be considered inadmissible because of late filing. The respondent had only two working days to study the newly claimed subject-matter and thus was at an unfair disadvantage. The case should therefore be remitted to the Opposition Division for further consideration. Moreover, claim 1 of the first auxiliary request is unclear since the term "alkali strength" is neither defined in the patent nor generally known to a skilled person. Its deletion as proposed in the second auxiliary request raises an Article 123(2) issue since all three features are originally coupled which has been acknowledged by the appellant in its first auxiliary request.

As regards the presence of an inventive step in the subject-matter of the main request, it has to be noted that claim 1 of document D1 also originating from the appellant does not impose any restrictions on the type of developing machine used so that the patent in suit is in fact a selection from the older patent, possibly for prolonging the life of the latter. Furthermore, as can be seen from the experimental data given in the contested patent for a replenisher molar ratio of 0.6, the underlying problem of reducing the developer

deterioration is not solved over the broad range claimed, i.e. the subject-matter of claim 1 is not inventive according to the established jurisprudence of the boards of appeal.

However, the issue of inventive step may also be looked at from a different standpoint. The claimed subject-matter is a mere aggregation of separate elements, the lack of functional interdependence of which is clear from two facts: the air shield even aggravates the problem of aluminium etching from the substrate whereas the use of developer and replenisher comprising specific molar ratios of alkaline metal silicate does not solve the problem of developer deterioration in air. In view of the two different problems which are caused by the presence of aluminium ions and CO₂ contamination, respectively, and require different solutions, it is appropriate to use two different closest prior art documents in a problem-solution approach.

Starting from document D1 as closest prior art for the aluminium ion problem, the different features of the claimed invention relate to the use of a developing machine of dipping type and to the provision of a shielding plate having a minimum coverage of the developer-air interface. Furthermore, document D1 already points to measures to be taken with respect to developer neutralisation by CO₂.

The specific apparatus features (air shield) are known from document D2 since according to this prior art the bath is closed, apart from inevitable entry and exit openings. Even if it is admitted that a certain amount of additional machinery may be necessary in the bath, a

high percentage of coverage is possible as can be seen from the 80% coverage achieved by the appellant. In any case, common sense would suggest to realise the highest coverage feasible since the amount of replenisher necessary should be expected to decrease with shielding. In this context, it must be borne in mind that one and the same presensitised plates can be developed by both types of machines, and that D1 is not restricted to the spraying type as has already been pointed out above. Hence, it is not surprising at all that the same developer composition may be used in both types of developing machines.

Moreover, document D3 disclosing a considerable developer coverage, i.e. more than 60% of the developer-air interface, could simply replace document D2. Systems using baths and thereby avoiding developer-air contact are also known from documents D4 and D5.

Finally, there is also an important overlap between the temperature ranges used in the contested patent and in document D1, and the lower limit of processing times derivable from D2 falls within the time range claimed in subclaim 8 of the patent in suit.

Reasons for the Decision

1. *Admissibility of Appeal*

The appeal meets the requirements of Rule 65 EPC and is therefore admissible.

2. *Main Request*

2.1 Article 123(2) EPC

2.1.1 Claim 1 of the main request has been amended in the present proceedings *inter alia* by specifying the molar ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$ of the developer to range from 1.0 to 1.5. It is true that this range has been originally disclosed at page 4, lines 16 to 19 of the A-publication of the patent in suit (see also the identical passage at page 4, lines 35 to 38 of the patent specification).

2.1.2 However, said passage relates to a "particularly preferred embodiment" of the claimed invention, which embodiment is characterised by a set of features, i.e. an aqueous solution of an alkali metal silicate is used as a developer, having

- "a molar ratio $[\text{SiO}_2]/[\text{M}_2\text{O}]$, which ranges from 1.0 to 1.5, and
- a concentration of SiO_2 of 1 to 4% by weight" (emphasis added by the Board).

Furthermore, for such a developer

- "it is a matter of course that a replenisher having alkali strength equal to or more than that of the developer is employed".

2.1.3 According to established jurisprudence of the boards of appeal, if a claim is to be restricted to a preferred embodiment, it is normally not admissible under Article 123(2) EPC to extract isolated features from a set of features which have originally been disclosed in combination for that embodiment. Such kind of amendment

would only be justified in the absence of any clearly recognisable functional or structural relationship among said features (see the examples cited in "Case Law of the Boards of Appeal of the European Patent Office, 3rd edition 1998", European Patent Office 1999, Section III-A, 1.1).

In the present case, a skilled reader cannot be assumed to have any doubts as to whether both the molar ratio **and** the SiO₂ concentration of the developer have to be selected in a specific way to arrive at the preferred aqueous solution, the selection then leading more or less automatically to an adaptation of the "alkali strength" of the replenisher. This follows from the use of the conjunction "and" and from the fact that there is no disclosure indicating that the above parameters of the developer may be selected separately. Moreover, the patent language clearly distinguishing between single facultative features and preferred options comprising combinations of features (see e.g. page 4 of the patent in suit) appears to be consistent in this respect.

In this context, the Board holds the view that a skilled reader would not come to a different conclusion when taking account of the preceding passage of the patent in suit referred to by the appellant (see page 4, lines 26 to 34). Firstly, by its wording as an additional requirement (see line 31) said passage does not seem to be clear with respect to the question of whether the preferred SiO₂ concentrations given for the replenisher are to be linked with the preferred molar ratios or are to be considered to be preferred features which may be selected independently. Secondly, from the prior art using the same developer system such reader

is aware of the fundamental importance of both parameter ranges in combination at least for the developer (see document D1, claim 1).

2.1.4 For these reasons, the subject-matter of claim 1 of the main request extends beyond the content of the application as filed, and claim 1 is accordingly not allowable (Article 123(2) EPC).

3. *First auxiliary request*

3.1 Admissibility because of "late filing"

3.1.1 Claim 1 of the first auxiliary request was submitted to the respondent and the Board per facsimile on Thursday, 28 September 2000, i.e. at least five full days before the scheduled oral proceedings. The insertion of missing features from the "particularly preferred embodiment" discussed above must have been expected as a straightforward reaction to doubts expressed by the Board in its communication dated 6 September 2000 with respect to the question of whether or not claim 1 of the main request complies with the requirements of Article 123(2) EPC.

Moreover, the Board cannot see that the amendment raises complex new issues which could not be handled within the existing time frame, nor has the respondent, apart from a mere allegation, given any convincing argument to the contrary (see in this context also recent decision T 633/97, not published in OJ EPO).

3.1.2 In consequence, the Board exercises its discretion in analogy to Article 114(2) and Rule 86(3) EPC (which according to the jurisprudence of the boards of appeal

is also applicable in opposition and appeal proceedings; see decision T 63/86, OJ EPO 1988, 224) to admit the first auxiliary request to the present proceedings.

3.2 Articles 123(2) and 84 EPC

3.2.1 Claim 1 of the first auxiliary request includes all the features disclosed in combination for the "particularly preferred embodiment" (see point 2.1.2 above) and thus meets the requirements of Article 123(2) EPC. In fact, admissibility of the claimed subject-matter under Article 123(2) EPC has not been contested by the respondent.

3.2.2 However, in the respondent's opinion claim 1 is unclear in that the term "alkali strength" is neither defined in the patent in suit nor does it appear to have a generally recognised meaning.

The Board does not consider this objection to be justified since according to elementary chemical knowledge which can be retrieved in basic handbooks or dictionaries published before the priority date of the patent in suit, "alkali" is synonymous to "base", and "base strength" in aqueous solution is expressed by pH as the appellant rightly pointed out at the oral proceedings.

Therefore, in the Board's view claim 1 of the first auxiliary request meets the requirements of Article 84 EPC.

3.3 Novelty

3.3.1 Novelty has not been contested in the present proceedings, nor has the Board any doubts in this respect as can be seen from the following assessment of inventive step.

3.4 Inventive step

3.4.1 The Board agrees with the parties that document D1 acknowledged in the contested patent comes closest to the subject-matter of claim 1.

This prior art already relates to a method for development processing a pre-sensitised plate for use in making a lithographic printing plate (see in particular column 1, lines 13 to 19), the known method comprising the steps of image wise exposing to light and development processing said plate comprising an aluminium plate and a photosensitive layer formed thereon (see D1, the Abstract). The aluminium plate may be anodised (see D1, column 4, lines 5 to 9), the anodised layer thickness being, e.g., about 2 g/m² (see D1, column 10, lines 58 to 61) or about 3 g/m² (see D1, column 12, lines 56 to 59). The development processing may be carried out at a temperature of about 15 to about 35°C (see D1, column 8, lines 59 to 61) utilising a conveying type automatic developing machine (see D1, column 1, line 19 and Figures 1 and 2 and associated text), while conveying the plate in an alkaline developer charged in a tank and having a pH of not less than 12 (see D1, column 8, lines 61 to 63), and while appropriately supplying a replenisher to the tank (see D1, the Abstract and Figures 1 and 2: "supplementary solution").

Furthermore, the developer and the replenisher are also aqueous solutions of an alkali metal silicate which have $[\text{SiO}_2]/[\text{M}_2\text{O}]$ ratios and SiO_2 concentrations substantially identical to those claimed in claim 1 (see D1, the Abstract: the $[\text{SiO}_2]/[\text{M}]$ ratios given must be multiplied by 2). Finally, it seems indeed to be "a matter of course" (see the patent in suit, page 4, lines 37 to 38) that the replenisher has an alkali strength equal to or more than that of the developer. Otherwise, it would not be possible for the replenisher to achieve the desired regeneration effect, i.e. in particular to keep the pH-value of the developer constant (see page 2, lines 21 to 26 of the patent in suit and column 10, lines 11 to 18 of D1).

3.4.2 Hence, in the Board's opinion the subject-matter of claim 1 in substance differs from the closest prior art only in that

- (i) the automatic developing machine is of dipping type whereas the developing machine used in D1 is either unspecified (see claim 1 of D1) or is of spraying type in the prior art embodiments (see D1, see column 2, lines 1 to 4); and
- (ii) the machine is provided with a plate for reducing contact between air and the surface of the alkaline developer in the tank, said plate shielding at least 60% of the whole developer-air interface, whereas no such plate is provided in D1.

The above differences relate to the prevention of carbon dioxide absorption causing deterioration of the developer properties (see page 2, lines 13 to 20 of the

patent in suit), whereas they appear to have a negative side-effect with respect to another problem referred to by the appellant, i.e. the formation of precipitates in the developer due to an increase in aluminium concentration (see page 3, line 46 to page 4, line 1 of the patent in suit). However, according to the contested patent said side-effect is suppressed by the specific developer and replenisher compositions claimed (see page 4, lines 2 to 41 of the patent in suit), which compositions are - as admitted by the appellant - in substance identical to those provided in document D1. In consequence, it has to be assumed that by starting from document D1 the aluminium concentration problem is automatically solved and no such side-effect will be observed.

The objective problem to be solved with respect to the closest prior art must therefore only be seen in reducing the negative impact of air exposure on the properties of aqueous alkali metal silicate developers.

- 3.4.3 The specific air contact problem is already mentioned in document D1 (see column 2, lines 19 to 23; lines 40 to 47 and lines 65 to 68) indicating that the contact area of the developer with air should be kept small for this reason.

Although the measures taken in D1 to alleviate this problem only concern a reduction of the open developer surface in the tank (see Figures 1 and 2 of D1), the Board is convinced that a skilled person will be aware of the fact that the spraying process as such involves an considerable amount of inevitable air contact due to droplet formation. Furthermore, in order to collect the developer sprayed, the developer tanks cannot be closed

in developing machines of the spraying type so that the proposed measures only involve a relative improvement without eliminating the problem. Thus, if CO₂ contamination is to be considered a predominant problem, there is, in the Board's view, a strong pointer in document D1 for a skilled person to look for a different process which does not have inherent drawbacks in this respect.

Moreover, developing machines of the spraying type have a further drawback mentioned in the contested patent (see page 2, lines 26 to 32) and in the prior art (see column 2, lines 48 to 65 of D1), i.e. clogging of spray nozzles by silicate precipitation. This undesirable phenomenon would, in the Board's opinion, intensify a skilled person's tendency to keep a look-out for alternatives. In this context, it has to be noted that the teaching of D1 can by no means be said to insist on the use of a spraying type machine as being essential, but rather focuses on the developer system and the replenishing aspect (see D1, claim 1 and column 2, lines 1 to 4).

- 3.4.4 Such alternative development processes for printing plates were available at the priority date of the patent in suit (see document D2, page 1, lines 1 to 6; or document D3, column 1, lines 3 to 14). Both documents referred to mention the alternative process types, i.e. spraying and dipping, and the air contact problem (see D2, page 1, lines 13 to 15 and 29 to 36; D3, column 1, lines 17 to 36 and column 7, lines 33 to 47). In both documents, a developing machine of dipping type is employed, the air contact being reduced by a plate covering the surface of the developer tank (see D2, the Figure: plate 12; D3, Figure 2: cover 32).

Document D3 explicitly refers to alkaline developers (see D3, column 7, lines 47 to 54).

Therefore, in view of the problem posed, the Board is convinced that a skilled person would readily consider the well-known alternative process of dipping the printing plates in a developer shielded from air contact by a plate covering the developer tank.

- 3.4.5 Having regard to the degree of shielding, neither one of documents D2 and D3 explicitly discloses a minimum percentage of the developer-air interface. However, document D2 utilises a cover which "closes" the tank ("le bac est fermé par un couvercle", see page 2, lines 8 to 9 and the Figure). According to document D3, the cover reduces the free liquid bath surface "considerably" ("die Abdeckung...verringert die freie Flüssigkeitsbadoberfläche erheblich"; see column 7, lines 33 to 44 and Figure 2).

Hence, even if the figures of said documents are considered to be schematic so that no dimensions can be derived from them, in view of the present problem and the directions nevertheless given in the prior art, a skilled person would endeavour to achieve the highest degree of shielding compatible with the overall machine design. He would then almost certainly end up with a shielding of not less than 60% of the whole developer-air interface, irrespective of whether or not a more pronounced shielding effect can be observed above said minimum value. Moreover, the necessary coverage would be obtained on a straightforward trial and error basis, once the general approach to adopt is obvious.

- 3.4.6 The appellant's additional argument relating to high

temperature developing as a further difference between the subject-matter claimed and the closest prior art (28 to 40°C in claim 1 as compared to "about 15° to about 35°C" in document D1, see column 8, lines 59 to 61) is not convincing since there is a considerable overlap between both temperature ranges, in particular in the high temperature region where the prior art upper limit lies in the upper half of the claimed range. Moreover, this upper limit is only approximately defined so that a skilled person would also try somewhat higher temperatures, thereby approaching the upper limit claimed.

Finally, claim 1 does not refer to high speed processing so that any arguments in this respect are irrelevant. This notwithstanding, processing times similar to those provided in the patent in suit (see claim 8) are derivable from document D2 (see page 4, penultimate paragraph).

- 3.4.7 For these reasons, the subject-matter of claim 1 of the first auxiliary request does not involve the inventive step required by Article 56 EPC. In consequence, claim 1 of the first auxiliary request is not allowable.

4 *Second auxiliary request*

- 4.1 The second auxiliary request differs from the first auxiliary request in that the feature relating to the "alkali strength" has been deleted.
- 4.2 As admitted by the appellant at the oral proceedings, this feature is not essential, but more or less an obvious - or even implicit - consequence of the

replenisher function. Irrespective of whether or not such deletion offends against Article 123(2) EPC, as the respondent believes, the above finding with respect to lack of inventive step of claim 1 of the first auxiliary request applies analogously to the subject-matter of claim 1 of the second auxiliary request which is in any case not allowable for this reason (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

P. Martorana

E. Turrini