

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2007/051276

International filing date (day/month/year)
09.02.2007

Priority date (day/month/year)
28.02.2006

International Patent Classification (IPC) or both national classification and IPC
INV. B41N3/03 B41C1/10

Applicant
AGFA GRAPHICS NV

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**


If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:




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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/EP2007/051276

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2007/051276

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>6-9</u>
	No: Claims	<u>1-5, 10</u>
Inventive step (IS)	Yes: Claims	<u>6-9</u>
	No: Claims	<u>1-5, 10</u>
Industrial applicability (IA)	Yes: Claims	<u>1-10</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

Reference is made to the following documents:

- D1 : EP 1 338 436 A (FUJI PHOTO FILM COMPANY LIMITED) 27 August 2003
(2003-08-27)
D2 : EP 1 400 351 A (FUJI PHOTO FILM COMPANY LIMITED) 24 March 2004
(2004-03-24) cited in the application
D3 : US 6 912 956 B2 (T.MORI) 5 July 2005 (2005-07-05) cited in the application

1. The present application does not meet the requirements of Article 33(2) PCT, because the subject-matter of claims 1 to 5 and 10 is not novel with respect to the prior art as defined in Rule 64.1 PCT. The reasons are as follows:

Document D1 discloses a positive-working lithographic printing plate precursor (see the title and page 30, line 5) comprising on a grained and anodized aluminium support having a hydrophilic surface a coating comprising:

- (i) an infrared absorbing agent and a colorant (see paragraphs [0314] to [0316];
- (ii) a first layer comprising a heat-sensitive oleophilic resin (this layer is referred to as the "B layer" in D1 and comprises an alkali-soluble resin having a phenolic hydroxy group, see paragraph [0320]; the same resins are used in the present case); and,
- (iii) a second layer between the said first layer and the said hydrophilic support wherein said second layer comprises a sulphonamide copolymer (this is referred to as the "A layer" in D1, and similar resins are employed in the present application, see paragraphs [0312], [0320] and [0531]).

In the absence of convincing evidence to the contrary, the Examining Division strongly argues that the surface of the grained and anodized aluminium support will, in all likelihood, have a mean pit depth equal to or less than $2.2 \mu\text{m}$ (this appears to be a relatively high value at first sight) when this value is measured by the method described in the present description since the centre-line average roughness is 0.3 to $0.6 \mu\text{m}$ (i.e. a much lower value, see paragraph [0119], thereby anticipating claim 1 of the present case).

Document D1 also discloses the subject-matter of dependent claims 2 to 5, which

relate to further embodiments of the subject-matter of claim 1 (see the passages previously mentioned).

In addition, the Examples of document D1 disclose a method for making a positive-working lithographic printing plate comprising the following steps:

- (i) providing a printing plate precursor according to any of claims 1 to 5,
- (ii) image-wise exposing the said precursor to heat and/or infrared radiation, and then,
- (iii) developing the exposed precursor with an aqueous alkaline developing solution, thereby removing the coating at the exposed areas whilst essentially not affecting the coating at the non-exposed areas (conforming to independent method claim 10 of the present case).

2.2 Document D2 additionally discloses the subject-matter of claims 1 to 5 and 10 of the underlying application (see the passages cited in the International Search Report).

Therefore, the underlying application fails to meet the requirements of Article 33(2) PCT, because the subject-matter of claims 1 to 5 and 10 is not novel with respect to the prior art as defined in Rule 64.1 PCT.

Regarding the novelty of dependent claims 6 to 9 (Article 33(2) PCT):

The closest prior art document is D1 (EP-A-1 338 436), which discloses a positive-working lithographic printing plate precursor comprising a grained and anodized aluminium support having a hydrophilic surface and coated with a coating comprising:

- (i) an infrared absorbing agent and a colorant;
- (ii) a first layer comprising a heat-sensitive oleophilic resin (this layer is referred to as the "B layer" in D1 and comprises an alkali-soluble resin having a phenolic hydroxy group); and,
- (iii) a second layer between the said first layer and the said hydrophilic support wherein said second layer comprises a sulphonamide copolymer (see especially paragraphs [0318] to [0320]). D1 makes no mention of a barrier layer comprising a development inhibitor as defined in claim 6 of the present International Patent Application

above said first and second layer.

The disclosure of document D2 is similar to that of D1. Document D3 teaches a monolayer printing plate precursor having a specific aluminium support.

The subject-matter of dependent claims 6 to 9 differs from document D1, because a specific barrier layer comprising a development inhibitor is provided above said first and second layers.

Regarding the inventive step of dependent claims 6 to 9 (Article 33(3) PCT):

The present application seeks to solve the problem of improving the development of positive-working lithographic printing plate precursors and, in particular, reducing the occurrence of blue-coloured spots in non-image areas (see the fourth and last paragraphs on page 3 of the description).

The experimental results shown in Tables 4, 5 and 6 on pages 43 to 45 show clearly that the problem of blue spots in non-image areas is effectively solved by providing a particular barrier layer comprising a development inhibitor above said first and second layers (as disclosed in claims 6 to 9 of the present international patent application). None of the prior art documents cited in the International Search Report even mentions the abovementioned problem, let alone gives any indication to the skilled person that the problem could possibly be solved by the specific means described in claims 6 to 9.

Therefore, the underlying application satisfies the requirements of Articles 33(2)-33(4) PCT with respect to prior art as defined in Rule 64.1 PCT, because the subject-matter of dependent claims 6 to 9 is Novel, possesses an Inventive Step and is Industrially Applicable.