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**Datasheet for the decision
of 28 September 2018**

Case Number: T 1626/16 - 3.3.09

Application Number: 10169036.0

Publication Number: 2275872

IPC: G03G9/087, G03G9/097, G03G9/08

Language of the proceedings: EN

Title of invention:
Electrophotographic toner and method of preparing the same

Applicant:
HP Printing Korea Co., Ltd.

Headword:

Relevant legal provisions:
EPC Art. 123(2), 111(1)
EPC R. 139

Keyword:

Amendments - correction of error - immediately evident that nothing else could have been intended - no

Amendments - extension beyond the content of the application as filed - yes (main request and first and second auxiliary requests)

Amendments - extension beyond the content of the application as filed - no (third auxiliary request)

Remittal for further prosecution

Decisions cited:

Catchword:



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Case Number: T 1626/16 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 28 September 2018

Appellant: HP Printing Korea Co., Ltd.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 9 February 2016
refusing European patent application No.
10169036.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman N. Perakis
Members: J. Jardón Álvarez
E. Kossonakou

Summary of Facts and Submissions

- I. This appeal lies from the decision of the examining division refusing European patent application No. 10169036.0.
- II. The decision was based on four sets of claims, namely a main request filed by letter dated 19 July 2011, a first auxiliary request filed by letter dated 23 December 2015 and second and third auxiliary requests, both filed on 27 January 2016 during the oral proceedings before the examining division.

Independent claims 1 and 9 of the main request read as follows:

"1. An electrophotographic toner that includes a latex, a colorant and a releasing agent, wherein the electrophotographic toner further comprises zinc (Zn), iron (Fe) and silicon (Si), wherein the [Zn]/[Fe] ratio is in the range of about 5.0×10^{-2} to about 2.0, wherein the [Si]/[Fe] ratio is in the range of about 5.0×10^{-4} to about 5.0×10^{-2} , and wherein [Zn], [Fe] and [Si] denote the intensities of Zn, Fe and Si, respectively, as measured by an X-ray fluorescence spectrometry."

"9. A method of preparing an electrophotographic toner, comprising:
mixing primary latex particles, a colorant dispersion and a releasing agent dispersion together to thereby produce a mixed solution;
adding an agglomerating agent to the mixed solution to thereby produce a primary agglomerated toner; and

coating the primary agglomerated toner with secondary latex particles to provide a secondary agglomerated toner,

wherein the secondary latex particles are prepared by polymerizing at least one polymerizable monomer, and wherein the electrophotographic toner comprises zinc (Zn), iron (Fe) and silicon (Si), wherein the $[Zn]/[Fe]$ ratio is in the range of about 5.0×10^{-2} to about 2.0, the $[Si]/[Fe]$ ratio being in the range of about 5.0×10^{-4} to about 5.0×10^{-2} , $[Zn]$, $[Fe]$ and $[Si]$ denoting the intensities of Zn, Fe and Si, respectively, as measured by an X-ray fluorescence spectrometry."

III. The examining division refused the application on the grounds that the subject-matter of the claims of all requests extended beyond the content of the application as filed and thus contravened Article 123(2) EPC. The examining division did not deal in its decision with any other patentability issues.

With respect to the main request, the examining division considered that the only amendment made to the subject-matter of independent claims 1 and 9, namely the replacement in the $[Zn]/[Fe]$ ratio of the limit value " 2.0×10^{-2} " by the limit value "2.0", was not a correction allowable under Rule 139 EPC. According to the examining division, although it might have been obvious that an error had occurred regarding the upper limit of the value range of that ratio, it was not evident that nothing other than the proposed correction could have been intended. Thus, the subject-matter of the independent claims of the main request extended beyond the content of the application as filed and consequently contravened the requirements of Article 123(2) EPC.

As regards auxiliary requests 1 and 2, the examining division considered that the values of the [Zn]/[Fe] ratio provided in the examples of the patent application did not allow the amendment of the value ranges of the [Zn]/[Fe] ratio in the independent claims of these requests. Nor did the examples or the application as filed provide adequate support for the [Zn]/[Fe] ratio values in claim 1 of auxiliary request 3. Thus, the subject-matter of the independent claims of the auxiliary requests also extended beyond the content of the application as filed and contravened the requirements of Article 123(2) EPC.

- IV. On 11 April 2016 the applicant (in the following: the appellant) filed notice of appeal. The statement setting out the grounds of appeal was filed on 20 June 2016. The appellant requested that the decision under appeal be set aside and that a patent be granted based on the claims of either the main request or any of the first to fourth auxiliary requests, all filed with the statement setting out the grounds of appeal.

The claims of the main request are the same as the claims of the main request before the examining division (see point II above).

The claims of auxiliary request 1 correspond to the claims of the main request with the sole difference that in the independent claims 1 and 9 the [Zn]/[Fe] ratio has been defined as being "in the range of 0.21 to 1.0".

Independent claim 1 of auxiliary request 2 reads as follows:

"1. A method of preparing an electrophotographic toner, comprising:
mixing primary latex particles, a colorant dispersion and a releasing agent dispersion together to thereby produce a mixed solution;
adding an agglomerating agent to the mixed solution to thereby produce a primary agglomerated toner; and
coating the primary agglomerated toner with secondary latex particles to provide a secondary agglomerated toner,
wherein the secondary latex particles are prepared by polymerizing at least one polymerizable monomer, and
wherein the electrophotographic toner comprises zinc (Zn), iron (Fe) and silicon (Si), wherein the [Zn]/[Fe] ratio is in the range of 0.21 to 1.0, the [Si]/[Fe] ratio being in the range of about 5.0×10^{-4} to about 5.0×10^{-2} , [Zn], [Fe] and [Si] denoting the intensities of Zn, Fe and Si, respectively, as measured by an X-ray fluorescence spectrometry,
wherein the primary latex particles and the secondary latex particles are each prepared using a polyester resin alone or using a mixture of a polyester resin and a polymer prepared by polymerizing at least one polymerizable monomer,
wherein the agglomerating agent comprises a Si- and Fe-containing metal salt, and wherein a Zn- containing compound is used as a catalyst in polymerizing the latex."

Independent claims 1 and 9 of auxiliary request 3 read as follows:

"1. An electrophotographic toner that includes a latex, a colorant and a releasing agent, wherein the electrophotographic toner further comprises zinc (Zn), iron (Fe) and silicon (Si), wherein the [Zn]/[Fe] ratio

is in the range of 5.0×10^{-4} to 5.0×10^{-1} , wherein the [Si]/[Fe] ratio is in the range of about 5.0×10^{-4} to about 5.0×10^{-2} , and wherein [Zn], [Fe] and [Si] denote the intensities of Zn, Fe and Si, respectively, as measured by an X-ray fluorescence spectrometry."

"9. A method of preparing an electrophotographic toner, comprising:

mixing primary latex particles, a colorant dispersion and a releasing agent dispersion together to thereby produce a mixed solution;

adding an agglomerating agent to the mixed solution to thereby produce a primary agglomerated toner; and

coating the primary agglomerated toner with secondary latex particles to provide a secondary agglomerated toner,

wherein the secondary latex particles are prepared by polymerizing at least one polymerizable monomer, and wherein the electrophotographic toner comprises zinc (Zn), iron (Fe) and silicon (Si), wherein the [Zn]/[Fe] ratio is in the range of 5.0×10^{-4} to 5.0×10^{-1} , the [Si]/[Fe] ratio being in the range of about 5.0×10^{-4} to about 5.0×10^{-2} , [Zn], [Fe] and [Si] denoting the intensities of Zn, Fe and Si, respectively, as measured by an X-ray fluorescence spectrometry."

The claims of auxiliary request 4 are not relevant for the present decision.

- V. On 20 March 2018 the board dispatched a summons to oral proceedings. In the accompanying communication the board indicated the relevant points to be discussed during the scheduled oral proceedings. The board also gave the preliminary view that the main request and auxiliary requests 1 and 2 were not allowable since the claimed subject-matter did not fulfil the requirements

of Article 123(2) EPC. By contrast, the amendments made to the claims of the third auxiliary request fulfilled the requirements of Article 123(2) EPC so that this request could serve as a basis for revising the present application.

Lastly, the board noted that it would seem appropriate to remit the case to the examining division for further prosecution as no other patentability issue had been dealt with in the appealed decision.

- VI. On 24 September 2018, at the appellant's request, the registry of the board informed it that the board would decide on the appeal at the oral proceedings scheduled for 28 September 2018 taking into account the preliminary views expressed in its communication.
- VII. On 28 September 2018 oral proceedings were held before the board in the absence of the appellant.
- VIII. The arguments presented by the appellant in its written submissions, in so far as they are relevant for this decision, may be summarised as follows:

- With regard to the main request, the proposed correction of the [Zn]/[Fe] ratio range in the subject-matter of the independent claims satisfied the requirements of Rule 139 EPC because it was evident that the [Zn]/[Fe] ratio value "2.0 x 10⁻²" was erroneous and that the intended value was "2.0" and nothing else. This correction, which required nothing more than the omission of the multiplication factor 10⁻², allowed the claims to cover all inventive examples and to exclude all comparative examples. Therefore the value of "2.0" was obvious for the skilled person and did not

amount to an arbitrary selection. Furthermore, this was corroborated by the disclosure of the priority document and the correction allowed in the grant proceedings before the USPTO. Consequently, the amendment in the subject-matter of the independent claims fulfilled the requirements of Article 123(2) EPC.

- With regard to auxiliary requests 1 and 2, the narrowing of the [Zn]/[Fe] ratio range in the subject-matter of the independent claims was based on the values taken from the examples of the application as filed. Thus, the amendment in the subject-matter of the independent claims of these requests did not contravene the requirements of Article 123(2) EPC. The skilled person would understand that a range of values between two working examples, in the absence of any comparative example with a value falling therein, also belonged to the claimed scope of the invention.

- With regard to auxiliary request 3, the [Zn]/[Fe] ratio range in the subject-matter of the independent claims was disclosed on page 29, lines 2 to 4, of the application as filed. Consequently, the subject-matter of the independent claims of auxiliary request 3 fulfilled the requirements of Article 123(2) EPC.

Reasons for the Decision

MAIN REQUEST

1. *Amendments. Request for correction (Rule 139 EPC)*

1.1 Claims 1 and 9 of the main request are based on claims 1 and 9 as filed but with the following amendment:

- The feature "wherein the [Zn]/[Fe] ratio is in the range of about 5.0×10^{-2} to about **2.0×10^{-2}** " has been amended to read "wherein the [Zn]/[Fe] ratio is in the range of about 5.0×10^{-2} to about **2.0**".

1.2 Indisputably, there is no support for the amendment in the application as filed, the [Zn]/[Fe] ratio being disclosed several times in the specification as in claim 1 as filed, i.e. with the ratio in the range of "about 5.0×10^{-2} to about 2.0×10^{-2} ". The appellant requests a correction of the limit value 2.0×10^{-2} according to Rule 139 EPC.

1.3 In order for a correction to be allowable under Rule 139, second sentence, EPC, it must be established that:

- (i) it is obvious that an error is in fact present in the document filed with the EPO, the incorrect information having to be objectively recognisable by the skilled person using common general knowledge, and
- (ii) the correction of the error is obvious in the sense that it is immediately evident that nothing but what is offered as the correction could have

been intended (see Case Law of the Boards of Appeal of the EPO, 8th edition, 2016, Chapter II.E.4.2)

- 1.4 The board agrees with the appellant that the skilled person would appreciate that there was an error in the original range of "about 5.0×10^{-2} to about 2.0×10^{-2} " in view of the contradiction between paragraphs 2 and 3 on page 6 and/or of the fact that the working examples do not fall within the originally claimed range, but it disagrees with the appellant's assertion that the suggested correction should be allowed because it was immediately evident to the skilled person that nothing else would have been intended.
- 1.5 As pointed out by the examining division in the appealed decision, other corrections would be equally possible, for instance the other ranges for the [Zn/[Fe] ratio disclosed on page 6 of the application as filed.
- 1.6 The appellant's argument that the proposed correction is allowable because it covers all working examples is not convincing. This could equally be achieved by taking other values for the upper limit, like 1.5 or 2.1 for instance. The proposed correction is only one of several options which would occur to the skilled person, who has no reason to assume that the error is the multiplication factor 10^{-2} whereas 2.0 is a correct value.
- 1.7 For these reasons the correction is not allowable and, as a consequence, the amendment made to the subject-matter of claims 1 and 9 is not supported by the disclosure of the application as filed (Article 123(2) EPC). Consequently, the main request is not allowable.

FIRST AND SECOND AUXILIARY REQUESTS

2. *Amendments (Article 123(2) EPC)*

- 2.1 In these auxiliary requests the [Zn]/[Fe] ratio has been defined in the subject-matter of all independent claims as being "in the range of 0.21 to 1.0". These values are taken from examples 2 and 3 of table 5 on pages 28 and 29 of the application as filed.
- 2.2 According to the appellant, the amendment should be allowed because the skilled person would understand that the range between two specific working examples would belong to the claimed scope of the invention, since no comparative example falls in the range defined by the exemplified values.
- 2.3 The board is not convinced. According to the EPO's practice, a range based on isolated values taken from examples can be allowed under Article 123(2) EPC only when such values are not closely associated with the other features of the examples (see Case Law of the Boards of Appeal of the EPO, 8th edition, Chapter II.E. 1.3.2).
- 2.4 This condition is clearly not met by the present application, because the [Zn]/[Fe] ratio is always associated with the [Si]/[Fe] ratio (see, for instance, claims as filed).
- 2.5 For this reason the subject-matter of claims 1 and 9 of the first auxiliary request and the subject-matter of claim 1 of the second auxiliary request is considered to extend beyond the content of the application as filed (Article 123(2) EPC). It follows that these requests are not allowable.

THIRD AUXILIARY REQUEST

3. *Amendments (Article 123(2) EPC)*

3.1 In this request independent claims 1 and 9 have been amended to define the [Zn]/[Fe] ratio as being in the range of " 5.0×10^{-4} to 5.0×10^{-1} ". According to the appellant, the basis for this amendment can be found on page 29, lines 2 to 4 of the application as filed.

3.2 The board agrees with the appellant that the amendment is supported by the first paragraph on page 29 of the application as filed, which explicitly discloses the range of the [Zn]/[Fe] ratio as now amended in the independent claims. Moreover, the cited paragraph discloses the related [Si]/[Fe] ratio of the claim. Thus, the sole amendment made to the claims does not extend their respective subject-matter beyond the content of the application as filed and does not contravene the requirements of Article 123(2) EPC.

4. *Remittal*

4.1 For the above reasons, the ground for refusal on which the impugned decision was based has been overcome by the claims of auxiliary request 3. Hence, the decision under appeal is to be set aside.

4.2 As other substantive requirements of the EPC have not yet been assessed by the examining division, the board considers it appropriate to exercise its discretion under Article 111(1) EPC to remit the case to the examining division for further prosecution on the basis of the claims of the third auxiliary request.

FOURTH AUXILIARY REQUEST

Since the board has decided to remit the case for further prosecution on the basis of the claims of the third auxiliary request, there is no need to deal with this request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution on the basis of claims 1 to 15 of the third auxiliary request filed on 20 June 2016.

The Registrar:

The Chairman:



M. Cañueto Carbajo

N. Perakis

Decision electronically authenticated