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**Datasheet for the decision  
of 12 June 2019**

**Case Number:** T 2110/15 - 3.2.07

**Application Number:** 07005805.2

**Publication Number:** 1839755

**IPC:** B03B9/06, B07B4/08, C22B7/00

**Language of the proceedings:** EN

**Title of invention:**  
Sorting apparatus and sorting method

**Patent Proprietor:**  
FUJIFILM Corporation

**Opponent:**  
Hydro Aluminium Rolled Products GmbH

**Headword:**

**Relevant legal provisions:**  
EPC Art. 123(2), 84, 83, 54(2), 56, 113(1)  
EPC R. 115(2)  
RPBA Art. 15(3), 12(4)

**Keyword:**

Amendments - allowable (yes)

Claims - clarity - main request (yes)

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - (yes)

Oral proceedings - held in absence of appellant

Right to be heard - non-attendance at oral proceedings

**Decisions cited:**

T 1704/06, T 0304/08, G 0002/88

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 2110/15 - 3.2.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.07**  
**of 12 June 2019**

**Appellant:** Hydro Aluminium Rolled Products GmbH  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
7 September 2015 concerning maintenance of the  
European Patent No. 1839755 in amended form.**

**Composition of the Board:**

**Chairman** V. Bevilacqua  
**Members:** A. Beckman  
C. Brandt

## Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal in the prescribed form and within the prescribed time limit against the decision of the opposition division maintaining the European patent No. 1 839 755 in amended form.
- II. Opposition had been filed against the patent as a whole based on Article 100(c) EPC (unallowable extension), Article 100(b) EPC (insufficiency of disclosure) and Article 100(a) EPC (lack of novelty and lack of inventive step).

The opposition division held that the subject-matter of the then auxiliary request 1 filed during the oral proceedings before the opposition division met the requirements of the EPC.

- III. The following documents of the opposition proceedings are referred to in the present decision:

D1: US 5,871,161,  
D2: DE 103 36 802 A1,  
D3: JP 2003-094031 A,  
D3b: German translation of document D3,  
D4: JP 10-337536 A,  
D4b: German translation of document D4,  
D7: Excerpt from "Abfallwirtschaft - Handbuch für Praxis und Lehre", Bilitewski et al. (3rd edition), 2000.

The following documents are cited in the statement setting out the grounds of appeal:

D11: JP 61-238929 and

D11a: English translation of abstract of D11.

IV. The appellant requested

that the decision under appeal be set aside and  
that the patent be revoked.

The respondent (patent proprietor) requested

that the appeal be dismissed.

Both parties subsidiarily requested appointment of oral proceedings.

V. The Board provided the parties with its preliminary non-binding opinion on the above requests in a communication dated 5 March 2019 pursuant to Article 15(1) RPBA.

The appellant reacted with its letter dated 10 May 2019 by submitting additional arguments, by withdrawing its request for oral proceedings, and by requesting a decision according to the state of the file.

VI. Oral proceedings before the Board took place as scheduled on 12 June 2019. Since the appellant, as announced with its submission dated 5 June 2019, did not attend, the oral proceedings were continued without the appellant according to Rule 115(2) EPC and Article 15(3) RPBA.

For the course of the oral proceedings, reference is made to the minutes thereof.

The present decision was given at the end of the oral proceedings.

VII. Independent **claim 1 of auxiliary request 1**, i.e. according to the patent as maintained by the opposition division, reads as follows (features added with respect to claim 1 of the patent as granted are highlighted by the Board):

"A sorting apparatus for sorting non-metallic impurities and lithographic printing plates, comprising:  
a cutting portion (39) that cuts a metal web (12) protected by slip sheets (18) into a predetermined size;  
a grinding portion (106) that grinds and deforms cut fragments (105) formed by the cutting portion (39);  
**a conveyor belt (112) that conveys ground fragments (108) formed by the grinding portion (106);** and  
a sucking portion that sucks the ground slip sheets (18) from ground fragments (108) deformed by the grinding portion (106) **while being conveyed on the conveyor belt (112).**"

Independent **claim 11 of auxiliary request 1**, i.e. according to the patent as granted and as maintained by the opposition division, reads as follows:

"A sorting method for sorting non-metallic impurities and lithographic printing plates comprising:  
a cutting step of cutting a metal web (12) protected by slip sheets (18) into a predetermined size;  
a grinding step of grinding and deforming cut fragments (105) formed in the cutting step; and  
a sucking step of sucking the ground slip sheets (18) from ground fragments (108) deformed in the grinding step."

VIII. The appellant's arguments can be summarised as follows and are dealt with in more detail in the Reasons for the Decision.

The appellant argued that

- the patent does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art,
- the subject-matter of claim 1 does not fulfill the requirements of Articles 84 and 123(2) EPC,
- the subject-matter of claim 1 is not novel over D2,
- the subject-matter of claim 1 lacks an inventive step starting from D2 as closest prior art in combination with the common general knowledge of the skilled person in the art as known, for example, from D7, or starting from D3 as closest prior art in combination with the teaching of D4 and/or of D7,
- the subject-matter of claim 11 is not novel over D1 or D2, and
- the subject-matter of claim 11 lacks an inventive step starting from D3 as closest prior art in combination with the teaching of D4, of D4 supported by D11, of D1 or of D11.

IX. The arguments submitted by the respondent in reply to the above objections are dealt with in detail in the Reasons for the Decision.

### **Reasons for the Decision**

#### 1. *Right to be heard - non attendance at oral proceedings*

Although the appellant did not attend the oral proceedings, the principle of the right to be heard pursuant to Article 113(1) EPC is observed since that

Article only affords the opportunity to be heard and, by absenting itself from the oral proceedings, a party gives up that opportunity (see the explanatory note to Article 15(3) RPBA cited in T 1704/06, not published in OJ EPO, see also the Case Law of the Boards of Appeal, 8th edition 2016, sections III.B.2.7.3 and IV.E.4.2.6.d)).

2. *Admittance into the proceedings of D11/D11a*

Together with the statement setting out the grounds of appeal, the appellant submitted for the first time documents D11 and D11a and argued for the first time that the subject-matter of claim 11 as maintained by the opposition division lacks an inventive step starting from D3 as closest prior art taken either in combination with the teaching of D11 or taken in combination with the teaching of D4 supported by the teaching of D11.

According to Article 12(4) RPBA the the Board has the power to hold facts and evidence submitted with the statement setting out the grounds of appeal inadmissible, when these could have been presented in first instance proceedings.

The Board cannot identify any justifying reason for allowing the introduction of these new documents and objections into appeal proceedings, since the subject-matter of claim 11 as maintained by the opposition division corresponds to the subject-matter of claim 11 as granted and was as such already under discussion in the written phase of the opposition proceedings.

Furthermore, the Board cannot see that any new surprising argument was raised in the oral proceedings



before the opposition division or in the impugned decision which would have justified the filing of D11 and D11a for the first time with the statement setting out the grounds of appeal.

For these reasons, D11 and D11a, together with the above mentioned inventive step objections, are not admitted into the proceedings.

3. *Clarity - Article 84 EPC*

3.1 The appellant argues that the addition of the feature "while being conveyed on the conveyor belt" to claim 1 as granted renders the subject-matter of claim 1 as maintained unclear. In addition the appellant puts forward that the wording "sucks the ground slip sheets from the ground fragments" does not clearly define whether and which particles or fragments remain after sucking on the conveyor belt and where exactly sucking takes place.

3.2 The Board cannot share the appellant's view for the following reasons.

3.2.1 The wording "a sucking portion sucks the ground slip sheets from the ground fragments" clearly means that the ground slip sheets are separated from the ground fragments. It is also clear from the context of the claim that the ground fragments consist of the ground slip sheets and the ground metal web.

The person skilled in the art therefore understands from the wording of claim 1 that the sucking portion removes by sucking the slip sheets from the conveyor belt while the ground fragments remain on the conveyor belt after sucking.

3.2.2 The position where sucking takes place on the conveyor belt is also clearly defined in the claim because to separate the ground slip sheets from the ground fragments, this operation has to take place downstream of the grinding portion.

3.3 In view of the above, the Board is not convinced by the clarity objections submitted by the appellant.

4. *Sufficiency of disclosure - Article 83 EPC*

4.1 Sucking portion

4.1.1 The appellant brings forward that there is no sufficient disclosure in the patent in suit for the generic "sucking portion" as claimed, since it is not disclosed how the slip sheets can be sucked from the conveyor belt in a different way than by suction nozzles arranged above the conveyor belt and cyclone separators connected to them.

As a consequence of that, the skilled person, even using common general knowledge, is not in the position to reduce the invention claimed in claim 1 to practice over the whole area claimed.

4.1.2 The Board disagrees and concurs with the respondent's view that the skilled person knows, on the basis of the common general knowledge, how to implement a sucking portion capable of sucking the ground slip sheets from the ground segments and, therefore, is able to carry out the invention over the whole area claimed.

4.2 Plate thickness

4.2.1 The appellant puts forward that the skilled person does not learn from the patent in suit how to adjust the grinding portion (claim 1) and/or grinding step (claim 11) to achieve a particular value falling within the range for the thicknesses of the ground fragments mentioned in claims 8 to 10, 12 and 13.

4.2.2 The Board disagrees. As argued by the respondent, these claims require the plate thickness to be set to the claimed range and not, contrary to the appellant's argumentation, to a particular value in said range.

Furthermore, the claims do not require the plate thickness to be changed or set during grinding. When the thickness of the cut fragments supplied to the grinding portion is set to the claimed range, the plate thickness of the ground fragments is also set to said range (see [0053] of disputed patent).

4.3 As a consequence of that, the Board is not convinced by the appellant's objections with regard to lack of sufficiency of disclosure (Article 83 EPC).

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

5.1 The appellant argues that the features "a conveyor belt that conveys ground fragments formed by the grinding portion" and "while being conveyed on the conveyor belt" were extracted from a particular embodiment, depicted in figure 2, and added to claim 1 thereby leading to an unallowable intermediate generalisation.

This was because sucking of fragments during transport

on the conveyor belt was disclosed in the embodiment of figure 2 only in combination with suction nozzles (116) disposed above and in relation to the conveyor belt and cyclone separators (114) connected to them (see paragraph [0032] of disputed patent).

According to the appellant, the wording of claim 1 not only leaves the arrangement of a sucking device in relation to the conveyor belt open, but also whether the sucking portion comprises a sucking device at all.

Furthermore, the appellant emphasises that the suction nozzles and the connected cyclone separators are functionally connected to each other. A suction without correspondingly adapted, arranged and set suction nozzles is not originally disclosed, as can be taken from paragraphs [0032], [0030] and figure 2 of the published application. Therefore, the suction nozzles are necessary even if a simple suction device is used instead of a cyclone separator, as disclosed in paragraph [0036] of the published application.

- 5.2 The Board disagrees. It is not evident from figure 2 or from the passages of the original description cited by the appellant (paragraphs [0030] and [0032] of the published application) that the structure of the sucking portion is related or inextricably linked to other features of the embodiment of figure 2.

The sucking portion can be constituted in any preferred way as long as it realises the sucking of the slip sheets from the ground fragments. This is supported by paragraph [0036] of the published application disclosing an alternative embodiment of a sucking portion in that "a simple suction device may also be used because it suffices as long as just the slip

sheets 18 can be sucked".

The skilled person might replace the particular sucking portion of the embodiment of figure 2 with another appropriately chosen sucking portion, without having to make modifications to other components, because also the particular position where suction takes place on the conveyor belt is not related or inextricably linked to other features of the embodiment of figure 2.

5.3 The appellant further argues that the feature according to which the ground slip sheets are sucked from the ground fragments while being conveyed on the conveyor belt, by also covering sucking the ground fragments and the slip sheets together, extended beyond the content of the originally filed documents. Furthermore, the appellant brings forward that the wording of claim 1 also covers an embodiment where suction takes place at the end of a conveyor belt which embodiment is not originally disclosed.

5.4 The Board notes that it is clear from the wording of claim 1 that the ground slip sheets, being lighter, are those which are sucked away by the sucking portion, i.e. away from the ground fragments which remain on the conveyor belt.

5.5 Hence, the subject-matter of claim 1 meets the requirements of Article 123(2) EPC.

6. *Claim 1 - Novelty, Article 54 EPC*

The appellant puts forward that the subject-matter of claim 1 is not novel over the content of the disclosure of D2.

6.1 The Board disagrees.  
D2 fails to disclose an apparatus which is suitable "for sorting non-metallic impurities and lithographic printing plates". As can be taken from paragraph [0002] of D2, the apparatus described within said document has been developed in the field of recycling motor vehicles. Clearly such an apparatus cannot be used, without modifications, for sorting non-metallic impurities and lithographic printing plates.

6.2 The appellant further argues that the shredder disclosed in D2 (see paragraphs [0008] and [0030]) represents a cutting portion according to claim 1. Additionally, also the impact crusher (paragraph [0020]: "Schlagbrecher") represents a cutting portion in the sense of claim 1.

The Board disagrees. A metal web protected by slip sheets cannot be cut into a predetermined size, as claimed in claim 1, by shredding or by using an impact crusher.

6.3 D2 discloses a conveyor (14, 18) that conveys ground fragments formed by a grinding portion (13, 17) and a suction hood (15) arranged above a conveyor that sucks fluff from the process line (see paragraph [0020], claim 8). The appellant argues that these suction hoods and suction blowers correspond to the sucking portion of claim 1 because they are suitable for sucking ground slip sheets from ground fragments.

The Board disagrees again. Suction devices provided to suck **floating particles** like fluff are not considered to be suitable to suck ground slip sheets from ground fragments.

6.4 As a consequence, D2 fails to disclose the following features of claim 1:

- A sorting apparatus for sorting non-metallic impurities and lithographic printing plates, comprising:
- a cutting portion that cuts a metal web protected by slip sheets into a predetermined size;
- a sucking portion that sucks the ground slip sheets from ground fragments deformed by the grinding portion while being conveyed on the conveyor belt.

6.5 For the above mentioned reasons, the appellant did not persuade the Board that the subject-matter of claim 1 is not novel over the disclosure of D2.

7. *Claim 11 - Novelty, Article 54 EPC*

The appellant argues that the feature "for sorting non-metallic impurities and lithographic printing plates" restricts method claim 11 only so far as the method has to be suitable for the sorting of non-metallic impurities and lithographic printing plates. The appellant refers to T 304/08 (unpublished in OJ EPO) with reference to G2/88 (OJ EPO, 1990, 93) and puts forward that the feature "for sorting non-metallic impurities and lithographic printing plates" in claim 11 cannot be construed as a functional technical feature.

On the basis of this argumentation, the appellant argues that the subject-matter of claim 11 is not novel over D1 or D2.

7.1 The Board disagrees. The considerations underlying the decision of the Enlarged Board of Appeal G 2/88 (*supra*)

pertain to claims which are directed to the use of a known substance for a particular purpose and, thus, are not applicable directly to method claim 11.

As a consequence of that, the Board concurs with the opposition division's finding that claim 11 comprises, as a functional technical feature, that non-metallic impurities and lithographic printing plates are actually sorted (impugned decision, point 2.3.1).

D2 discloses sorting of shredded vehicle parts (paragraphs [0001] and [0002]).

D1 discloses sorting of the components of laminated films from milk containers, retort pouches used for packaging a brick-type paper container or packaging curry sauce or stew (column 1, lines 6 to 14).

However, in view of the above, neither D1 nor D2 discloses a method for sorting non-metallic impurities and lithographic printing plates, wherein non-metallic impurities and lithographic printing plates are actually sorted.

- 7.2 Additionally, neither of these documents discloses a sucking step of sucking the ground slip sheets from ground fragments deformed in the grinding step, since neither of them discloses slip sheets.
- 7.3 Following the respondent's view, D2 fails to disclose the cutting step, as the Board's reasoning with regard to the cutting portion (see point 6.2 above) applies to the corresponding features of claim 11, mutatis mutandis.



7.4 For the above mentioned reasons, the appellant did not persuade the Board that the subject-matter of claim 11 is not novel over the disclosure of D1 or D2.

8. *Claim 1 - Inventive step, Article 56 EPC*

8.1 The appellant contests that the subject-matter of claim 1 involves an inventive step starting from D2 (and in particular from the apparatus mentioned in paragraphs [002] and [020] of this document) as closest prior art in combination with the common general knowledge, because it would be obvious for the skilled person to provide a suitable suction or to adapt the performance of the existing suction in such a way that the light fragments can be sucked off the conveyor belt. To support the above objection the appellant further refers to D7.

The Board disagrees, because this argumentation fails to take account of the distinguishing features identified above under point 6.4.

As the sorting apparatus known from D2 is not even suitable for sorting non-metallic impurities and lithographic printing plates, this document does not even appear to be a promising starting point for the discussion of inventive step.

Consequently, the skilled person has no motivation to combine its common general knowledge or the teaching of D7 with the method of D2 and would, thus, not arrive to the claimed method in an obvious manner.

8.2 The appellant contests that the subject-matter of claim 1 involves an inventive step starting from D3 as

closest prior art in combination with the teaching of D4 and/or of D7.

- 8.2.1 It is undisputed that D3 does not disclose a grinding portion that grinds and deforms cut fragments formed by the cutting portion.
- 8.2.2 The appellant argues that according to D3 suction takes place at the end portion of conveyor belt (90) (paragraphs [0038], [0039], [0041] of D3b; figure 4A and 4B of D3). Even under the assumption that the slip sheets would not be sucked from the conveyor belt, such an arrangement would be an obvious measure for the skilled person on the basis of its common general knowledge, as documented e.g. by D7.

The Board cannot share this view for the following reasons.

According to D3 the cut aluminium scrap metal **firstly falls** from the end portion of conveyor belt (90) into the separation vessel (94) and then to the truncated cone part (98) of the separation vessel, whereas the slip sheet waste is **subsequently raised up** by the ascending air current produced **in the separation vessel** (94) (paragraph [0041] of D3b). Thus, the cyclone separator cannot separate the fragments "while being conveyed on the conveyor belt", but does it after the conveyor belt has transported the fragments into the cyclone separator.

As a consequence, D3 does not disclose a sucking portion that sucks slip sheets from fragments while being conveyed on the conveyor belt.

8.2.3 Hence, starting from D3 as the closest prior art, the subject-matter of claim 1 differs from the disclosure of D3 at least by a grinding portion that grinds and deforms cut fragments formed by the cutting portion, and by a sucking portion that sucks ground slip sheets from ground fragments deformed by the grinding portion while being conveyed on a conveyor belt.

8.2.4 These distinguishing features have the synergetic technical effect that the slip sheets can be better separated from the metal web by sucking (see paragraph [0050] of the contested patent).

The objective technical problem may therefore be regarded as providing a sorting apparatus for sorting non-metallic impurities and lithographic printing plates, wherein the separation of slip sheets can be improved.

8.2.5 The Board follows the respondent's arguments that the teaching of D4 does not cast doubts on inventive step of claim 1, because this document relates to an apparatus for separating aluminium foil and lamination paper, which are both leaf-shaped and both very flexible. Because of the above differences, the skilled person, seeking for a better separation of flexible slip sheets from a metal web which are adhered electrostatically, would not be motivated to apply the teaching of D4 to solve the above mentioned problem.

Further, following the respondent's arguments, D4 teaches that separation is achieved by the use of the hammer crusher (6) which utilizes impact forces to crush the aluminum into a granulate and explode the lamination paper into a cotton-like body. The aluminum granulate is sorted from the cotton-like body by

utilizing a difference in the specific gravities of the two.

If the skilled person employed the hammer crusher of D4 to the disclosure of D3, he would notice that the cutting portion should be removed, since the hammer crusher would not effectively produce cotton-like body from the lamination paper, neither granulate from the aluminum, according to the description made in paragraph [0009] of D4b. Thus, D4 teaches away from cutting the material to be sorted before grinding.

Additionally, it is noted that D4 does not give any indication to provide a sucking portion that sucks the ground slip sheets from ground fragments deformed by the grinding portion while being conveyed on the conveyor belt.

D7 also does not contain any teaching suitable to cast doubts on inventive step.

D7 generally discloses that suction can be used to separate fragments transported on a conveyor. However, D7 does not teach to use a grinding portion to improve the separation. Thus, even if the skilled person applied the suction device of D7 to the sorting apparatus known from D3, he would realize that an efficient separation of the fragments cannot be achieved.

Hence, the appellant did not persuade the Board that the combination of the teaching of D3 with the teaching of D4 and/or of D7 would lead the skilled person to the claimed subject-matter in an obvious manner.

9. *Claim 11 - Inventive step, Article 56 EPC*

9.1 The appellant contests that the subject-matter of claim 11 involves an inventive step starting from D3 as closest prior art in combination with the teaching of D4 or of D1.

For the reasons given under point 7.1 above, the subject-matter of claim 11 comprises as a functional technical feature that non-metallic impurities and lithographic printing plates are actually sorted.

D1 does not relate to the sorting of lithographic printing plates at all. The skilled person would therefore not be motivated to apply the teaching of D1 to the teaching of D3.

The Board notes that, since method claim 11 comprises the corresponding method features to the apparatus features of claim 1, the above-mentioned reasons with regard to inventive step of claim 1 (see point 8.2 above) starting from D3 as closest prior art in combination with the teaching of D4 apply, *mutatis mutandis*, to the subject-matter of method claim 11.

Consequently, the appellant failed to persuade the Board that the person skilled in the art, starting from the method known from D3, and seeking to solve the problem mentioned under point 8.2.4 above would be led by the teaching of D4 or D1 to the subject-matter of method claim 11 without the exercise of an inventive activity.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



G. Nachtigall

V. Bevilacqua

Decision electronically authenticated