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**Datasheet for the decision
of 22 April 2021**

Case Number: T 0237/18 - 3.2.03

Application Number: 08868693.6

Publication Number: 2243635

IPC: B41N1/08, B41N3/00, C22B7/00,
C22B21/06, F27D1/00, C22B21/00

Language of the proceedings: EN

Title of invention:
METHOD OF REGENERATING METAL

Patent Proprietor:
FUJIFILM Corporation

Opponent:
Hydro Aluminium Rolled Products GmbH

Headword:

Relevant legal provisions:
EPC Art. 54, 56
RPBA Art. 12(4)

Keyword:

Novelty - (yes) - implicit disclosure (no)

Inventive step - (no) - common general knowledge - obvious solution

Late-filed evidence - submitted with the statement of grounds of appeal - admitted (yes)

Late-filed facts - submitted with the statement of grounds of appeal (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
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Case Number: T 0237/18 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 22 April 2021

Appellant: Hydro Aluminium Rolled Products GmbH
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 6 November 2017 rejecting the opposition filed against European patent No. 2243635 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman G. Patton
Members: R. Baltanás y Jorge
E. Kossonakou

Summary of Facts and Submissions

- I. European patent No. 2 243 635 (in the following, "the patent") relates to a method of regenerating metal.
- II. Opposition was filed against the patent based on Article 100(b) EPC and Article 100(a) EPC together with Articles 54 and 56 EPC.
- III. The appeal lies from the decision of the opposition division to reject the opposition.

In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), the Board indicated its preliminary opinion of the case.

Oral proceedings were held on 22 April 2021.

- IV. Requests

The opponent (appellant) requested that the decision under appeal be set aside and that the patent be revoked on the grounds of lack of disclosure (Article 100(b) EPC) and of lack of novelty and of inventive step (Article 100(a) in conjunction with Articles 54 and 56 EPC, respectively).

The patent proprietor (respondent) requested that the appeal be dismissed (main request), or alternatively that the patent be maintained in amended form on the basis of one of auxiliary requests I to III filed with the reply to the statement setting out the grounds of appeal.

V. Claim 1 as granted, including the numbering of its features as adopted by the parties, reads as follows:

- 1a)** *A metal regeneration method comprising:*
- 1b)** *a melting furnace cleaning step*
- 1ba)** *of melting pure aluminum*
- 1bb)** *with an aluminum content of 99.5 % by weight or higher in a melting furnace to clean the inside of the melting furnace;*
- 1c)** *and a metal regeneration step*
- 1ca)** *of melting waste lithographic printing plates selected from unused lithographic printing plates and used lithographic printing plates,*
- 1cb)** *in the melting furnace whose inside has been cleaned by the melting furnace cleaning step, to obtain regenerated metal.*

VI. Claim 1 of auxiliary request I reads as follows (amendments with regard to the granted claim 1 marked in bold):

*A metal regeneration method comprising:
a melting furnace cleaning step of melting pure aluminum with an aluminum content of 99.5 % by weight or higher in a melting furnace to clean the inside of the melting furnace; and
a metal regeneration step of melting waste lithographic printing plates selected from unused lithographic printing plates and used lithographic printing plates, in the melting furnace whose inside has been cleaned by the melting furnace cleaning step, to obtain regenerated metal,*
wherein the size of the waste lithographic printing plates used in the metal regeneration step is from 2 to 60 cm square.

VII. Claim 1 of auxiliary request II reads as follows (amendments with regard to the granted claim 1 marked in bold):

*A metal regeneration method comprising:
a melting furnace cleaning step of melting pure aluminum with an aluminum content of 99.5 % by weight or higher in a melting furnace to clean the inside of the melting furnace; and
a metal regeneration step of melting waste lithographic printing plates selected from unused lithographic printing plates and used lithographic printing plates, in the melting furnace whose inside has been cleaned by the melting furnace cleaning step, to obtain regenerated metal,*
wherein a Si free furnace whose furnace walls do not contain Si is employed as the melting furnace.

VIII. Claim 1 of auxiliary request III reads as follows (amendments with regard to the granted claim 1 marked in bold):

*A metal regeneration method comprising:
a melting furnace cleaning step of melting pure aluminum with an aluminum content of 99.5 % by weight or higher in a melting furnace to clean the inside of the melting furnace; and
a metal regeneration step of melting waste lithographic printing plates selected from unused lithographic printing plates and used lithographic printing plates, in the melting furnace whose inside has been cleaned by the melting furnace cleaning step, to obtain regenerated metal,*
wherein the temperature for melting the waste lithographic printing plates in the metal regeneration step is 680 to 750°C.

IX. State of the art

The following documents were cited, both during the opposition proceedings and in the statement setting out the grounds of appeal and/or in the reply to it, and are relevant to this decision:

A2: JP 2005 186 415 A
A2a: Machine translation of A2 into English
A4: JP 2007 063 583 A
A4a: Machine translation of A4 into English
A11: JP 2007 224 391 A
A11a: Machine translation of A11 into English

The appellant, with the statement setting out the grounds of appeal, filed the following further document which is relevant to this decision:

A14: Dr.-Ing. Klaus Krone, "Aluminiumrecycling - Vom Vorstoff bis zur fertigen Legierung",
Vereinigung Deutscher Schmelzhütten e.V.,
Düsseldorf, 2000, pages V-VI, 435-441.

X. The appellant's arguments can be summarised as follows:

(a) Main request

Novelty

The granted claim 1 is not novel over A2, A4 and A11. The cleaning step is implicit in particular in documents A4 and A11, since the disclosed resulting alloy can only be explained by a cleaning step as claimed or by repetition of the regeneration step which

results *de facto* in such a cleaning step. The argument concerning the implicit disclosure in A4 and A11 is not a fresh one, since the point about this implicit disclosure has already been raised in the statement setting out the grounds of appeal.

Inventive step

The subject-matter of claim 1 does not involve an inventive step starting from A4 or A11 in view of the common general knowledge of the skilled person. The skilled person would repeat the regeneration step described in A4 or A11 in the same furnace in order to avoid contamination and to lower costs, since they are well aware of its advantages, thus carrying out a method falling under the scope of claim 1.

(b) Auxiliary request I

The subject-matter of claim 1 is not inventive over A11 in combination with the common general knowledge of the skilled person for the same reasons as for the main request, since A11 discloses a size of the waste lithographic printing plates falling within the claimed range. Claim 1 does not exclude further processing, such as compression, of the plate particles before they are introduced into the melting furnace.

(c) Auxiliary request II

The subject-matter of claim 1 does not involve an inventive step over A11 combined with the common general knowledge. The skilled person is aware of the danger of contamination by Si and would thus avoid using furnace walls made of materials containing this element.

(d) Auxiliary request III

The subject-matter of claim 1 is not inventive when starting from A4 in view of the common general knowledge of the skilled person, since the claimed range of temperatures includes usual melting temperatures for recycling aluminium, as disclosed in A4.

XI. The respondent's arguments can be summarised as follows:

(a) Main request

Novelty

None of the documents discloses a cleaning step as claimed. The material used for the cleaning and its later removal from the furnace, and not using it for any regeneration purposes, are distinguishing features with regard to repetition of the regeneration step disclosed in A2, A4 or A11. The argument concerning the implicit disclosure of the cleaning step raised during the oral proceedings before the Board is a new one and should not be admitted.

Inventive step

A2, A4 and A11 do not disclose any cleaning step. The skilled person would not arrive at the claimed invention when starting from any of these documents even if faced with the technical problem of increasing the regeneration yield.

(b) Auxiliary request I

The granted claim 3, on which the amended claim 1 is based, was not challenged in opposition, and the attack against inventive step of the invention is thus late-filed.

The range of particle sizes disclosed in A11 is broader than the claimed range. Moreover, the compression of the plate particles in A11 is not provided for in claim 1 of auxiliary request I and stands against the technical effect to be achieved.

(c) Auxiliary request II

Document A14 should not be admitted into the procedure, as it could and should have been filed earlier, since it concerns the granted claim 4.

(d) Auxiliary request III

The claimed temperature range improves the balance between melting time and regeneration yield, as disclosed in example 5 of the patent.

Reasons for the Decision

1. Main request
- 1.1 Interpretation of claim 1
- 1.1.1 Feature 1b) (cleaning step)

The respondent argues that the cleaning step defined in claim 1 presupposes that the "*pure aluminum*" used for

the cleaning step is taken out of the metal furnace and discarded. Thus a metal regeneration step cannot be equated with a cleaning step, since the aim of a metal regeneration step is to provide metal for further use.

This argument is not persuasive for the following reasons:

Claim 1 defines two steps: a cleaning step (feature 1b)) and a metal regeneration step (feature 1c)). Thus the invention defines methods in which two steps can be separately identified as a cleaning step and a metal regeneration step, respectively.

A melting process in a melting furnace necessarily involves the dilution of remaining traces in the walls of the furnace, and amounts to providing a cleaning effect for the furnace. Whether a melting process prior to subsequent metal regeneration melting is explicitly purposively conceived and defined as a cleaning step in the prior art is actually irrelevant, since the nature of a cleaning step is defined by the dilution of remaining traces in the furnace and by the removal of these traces together with the metal used in the cleaning step. Thus a melting step using pure aluminium as defined in feature 1bb) prior to a subsequent metal regeneration melting step provides a cleaning effect in the furnace used with regard to the metal regeneration melting step. Such a melting step would thus represent a cleaning step within the meaning of claim 1.

The Board agrees with the respondent that the concept of "cleaning" necessarily implies that some dirt is removed from a furnace before the second step (i.e. metal regeneration) subsequently takes place in the same furnace. This can only be done by taking out the

pure aluminium used in the cleaning step (feature 1bb)), otherwise, the contaminants removed from the furnace walls by the pure aluminium would be left in the furnace, which goes against the logic of a cleaning step. However, as no further limitation apart from this implicit one is defined in claim 1 for the fate of the pure aluminium used in the cleaning step, it can subsequently be used for any purpose, including the production of lithographic plates.

1.1.2 Feature 1ba) (pure aluminium)

The respondent argues that, when interpreting the feature "*pure aluminum*", the general disclosure of the patent must also be taken into account, so this feature cannot correspond to used lithographic printing plates. Used lithographic plates would not be considered "*pure aluminum*" by the skilled person due to the presence of ink, support layers and cleaning products.

The Board does not share this opinion.

Features 1ba) and 1bb) are clear in themselves, and thus do not require interpretation in the light of the description (see Case Law of the Boards of Appeal, ninth edition, 2019, II.A.6.3.1).

Feature 1ba) defines the melting of pure aluminium during the cleaning step, and feature 1bb) defines that this pure aluminium must have an aluminium content of 99.5 % by weight or higher.

However, in view of the wording of claim 1, the skilled person will understand that any material **comprising** aluminium which meets the claimed aluminium content falls within the scope of said features, i.e. the

presence of ink, support layers and cleaning products is not excluded.

1.2 Novelty, claim 1 - Article 54 EPC

1.2.1 A2/A2a

(a) Features 1b), 1ba) and 1bb)

The appellant argues that A2 discloses a cleaning step as defined in claim 1, since the successive melting of planographic blocks using aluminium JIS 1050 implies that pure aluminium as defined in features 1ba) and 1bb) is used to clean the furnace by melting a first series of planographic blocks before the melting of a subsequent series, which would then form the metal regeneration step of feature 1c), see A2a, paragraph [0041].

This argument cannot succeed for the following reasons:

Even if it can be agreed that the process disclosed in A2/A2a **can** take place several times, no implicit or explicit disclosure can be found concerning subsequent melting of two series of used planographic blocks in the same furnace, which is a necessary condition for considering the presence of a cleaning step prior to a metal regeneration step as claimed.

(b) Conclusion

The subject-matter of claim 1 differs from A2/A2a in features 1b), 1ba) and 1bb).

1.2.2 A4/A4a

(a) Disclosure of A4

Document A4/A4a discloses a metal regeneration method (see A4a, paragraph [0001]) comprising a metal regeneration step (see A4a, paragraphs [0020] or [0026]) of melting waste lithographic printing plates selected from used lithographic printing plates ("*used planographic block*": see A4a, paragraph [0024]) in a melting furnace ("*smelter*") to obtain regenerated metal (see A4a, paragraphs [0026]-[0028]). Hence features 1a), 1c), 1ca) and 1cb) are known from A4.

The respondent does not contest this.

(b) Implicit disclosure of feature 1b)

The appellant argues that A4/A4a implicitly discloses the claimed cleaning step when read by the skilled person, since the aluminium content of the resulting product (99.60 % and 99.55 % of embodiments 1 and 2, respectively, in Table 1, second and third lines; paragraphs [0026] and [0027]) is the same as that of the used planographic blocks (first line in Table 1) including for the impurities Cu, Si and Fe (especially embodiment 1, second line of Table 1). This could only be explained either by a cleaning step as defined in claim 1 or by repetition of the process disclosed in A4/A4a, which would automatically lead to disclosure of the defined cleaning step.

(c) Admission of the argument about implicit disclosure

The respondent requests that the above-mentioned argument not be admitted into the proceedings, since it was argued for the first time at the oral proceedings before the Board, i.e. at the last possible moment.

This request cannot be granted, since the alleged implicit disclosure of this feature to the skilled person has already been argued in the statement setting out the grounds of appeal (see page 12 of the statement, sixth paragraph). The arguments presented by the appellant at the oral proceedings are therefore regarded as a mere development of the already-existing line of argumentation. Thus they cannot be excluded by the Board as they do not constitute an amendment to the appellant's case (Article 13(2) RPBA 2020).

(d) Assessment of the alleged implicit disclosure

The arguments of the appellant concerning the alleged implicit disclosure of features 1b), 1ba) and 1bb) cannot be accepted, since they are merely speculative.

In particular, it has not been proved that the resulting composition of aluminium in the end product of A4/A4a **inevitably** results from a cleaning step as defined in claim 1.

As a matter of fact, other furnace cleaning methods in addition to the one claimed are also known and available to the skilled person (mechanical descaling of the furnace walls; melting of

different materials; treatments with salts and gases), as confirmed by the technical expert accompanying the appellant during the oral proceedings before the Board. The results of A4/A4a could then be explained by the use of other cleaning methods not involving the use of pure aluminium as defined in features 1ba) and 1bb), or could even be due to other factors such as the composition of the furnace walls or the ratio between total molten product and remaining traces in the furnace.

(e) Conclusion

The subject-matter of claim 1 differs from A4/A4a in features 1b), 1ba) and 1bb).

1.2.3 A11/A11a

(a) Disclosure of A11

Document A11/A11a discloses a metal regeneration method (see A11a, paragraph [0001]) comprising a metal regeneration step (see A11a, paragraphs [0008] or [0052]) of melting waste lithographic printing plates selected from used lithographic printing plates ("*lithographic printing plate*", "*planographic printing plate*") in a melting furnace to obtain regenerated metal (see A11a, paragraph [0052]). Hence features 1a), 1c), 1ca) and 1cb) are known from A11.

The respondent does not contest this.

(b) Implicit disclosure of features 1b), 1ba) and 1bb)

The appellant bases its arguments on the disclosure of the aluminium content of the end product in the table of paragraph [0058] of A11 (99.60%; embodiment 1 on second line of table) analogously to A4/A4a.

The respondent contests the admission of these arguments on the same grounds as for A4/A4a.

The disclosure of features 1b), 1ba) and 1bb) in A11 has however already been argued in the statement of grounds of appeal (see page 13, third paragraph from the bottom).

Since the circumstances are analogous to those of the novelty objection based on A4/A4a, the same reasoning applies here (see points 1.2.2(b), (c) and (d) above).

(c) Conclusion

The subject-matter of claim 1 differs from A11/A11a in features 1b), 1ba) and 1bb).

1.3 Inventive step, claim 1 - Article 56 EPC

1.3.1 Starting point

The appellant starts the inventive step attack from either A4/A4a or A11/A11a.

The respondent does not contest the choice of starting point.

The Board agrees that both A4/A4a and A11/A11a represent suitable starting points for assessing inventive step of the claimed invention, since like claim 1 they both concern metal regeneration methods for lithographic printing plates involving aluminium.

1.3.2 A4/A4a in combination with common general knowledge

(a) Technical effect and objective technical problem

The technical effect of the distinguishing features 1b), 1ba) and 1bb) (see point 1.2.2(e) above) is that undesired metal traces are not present at the metal regeneration step.

The objective technical problem can thus be formulated as preventing contamination of the regenerated metal in the method of A4/A4a.

The respondent argues that the aim of the patent is to remove contaminants from the melting furnace, which is more specific than the objective technical problem, since it implies that the melting furnace must contain such contaminants before the cleaning step.

However, claim 1 does not define this circumstance and the distinguishing features are not specifically related to removing contaminants as such, but merely to avoiding contaminating the regenerated metal. Therefore the proposed aim cannot be accepted as the objective technical problem to be solved.

The respondent has also proposed as an objective technical problem to increase the regeneration

yield of the method, since less or no pure aluminium would have to be added during the metal regeneration step in order to achieve a high level of aluminium content in the end product.

This problem cannot be accepted either since a high regeneration yield is also achieved in A4. As a matter of fact, the regeneration yield of embodiments 1 and 2 of Table 1 in paragraph 27 is even higher than that of the contested patent, see example 6, paragraphs 61 to 65.

(b) Common general knowledge

The skilled person is aware that, if a particular metal composition is to be produced in a melting furnace and contamination is to be avoided, an obvious solution is to clean the melting furnace beforehand (see impugned decision, point 22). Among others, the consecutive repetition of melting the same alloy in the same furnace belongs to the known cleaning methods which are available to the skilled person (see also point 1.2.2.(d) above).

(c) Combination

The skilled person starting from A4/A4a and faced with the posed objective technical problem would, by applying their common general knowledge, immediately arrive at the solution of using the same melting furnace for consecutive metal regeneration steps, as this is an inexpensive cleaning step in comparison with the others.

(d) Consequence: cleaning step

A4/A4a discloses the melting of used lithographic plates ("*used planography block*") with an aluminium content of 99.60 % by weight (see A4a, paragraph [0024]). This material qualifies as "*pure aluminum*" as defined in claim 1 (see point 1.1.2 above).

The respondent argues that the presence and/or removal of the recording layer and the ink may result in "further metal impurities" in the material used for the alleged cleaning step.

However, this is not persuasive, since the fact that remnants **of other materials** are melted together with the pure aluminium at the cleaning step is not excluded by the wording of claim 1 (see point 1.1.2 above).

Thus the repetition of two consecutive metal regeneration steps where "*pure aluminum*" is melted amounts to the presence of a cleaning step as defined in features 1b), 1ba) and 1bb) of claim 1 (see point 1.1.1 above).

Since it would be obvious to the skilled person to repeat the regeneration steps disclosed in A4/A4a, they would arrive at the claimed invention without exercising any inventive skill.

(e) Conclusion

The subject-matter of claim 1 of the main request does not involve an inventive step over the combination of A4/A4a with the common general knowledge of the skilled person.

1.3.3 A11/A11a in combination with common general knowledge

A11/A11a discloses a metal regeneration method where used lithographic plates ("*planographic printing plate*") are melted. The aluminium raw material obtained contains 99.60 % by weight of aluminium (see table 1 of paragraph [0058] of A11 and paragraph [0056] of A11a). This is said to be the same purity as that of the melted lithographic plates (see paragraph [0056] of A11a). Thus A11/A11a discloses the melting of "*pure aluminum*" within the meaning of claim 1 (see point 1.1.2 above).

Since the disclosure of A11/A11a is analogous to that of A4/A4a with regard to the claimed subject-matter, the same reasoning applies concerning the obvious character of the differentiating features 1b), 1ba) and 1bb) (see point 1.3.2 above).

Consequently, the subject-matter of claim 1 of the main request is also obvious in view of A11/A11a in combination with the common general knowledge.

1.3.4 Conclusion

The subject-matter of claim 1 does not involve an inventive step (Article 56 EPC).

2. Auxiliary request I, inventive step - Article 56 EPC

2.1 Admissibility of the attack, Article 12(4) RPBA 2007, Article 13(2) RPBA 2020

Claim 1 of auxiliary request I consists in the combination of the features of claims 1 and 3 of the patent as granted.

The respondent argues that the granted claim 3 was not challenged in opposition, and that the late-filed attack on inventive step starting from A11/A11a should not be admitted by the Board.

However, the granted claim 3 was attacked with the same document during the opposition proceedings.

With its letter of 14 July 2017, the then-opponent argued that the subject-matter of the granted claim 3 was anticipated by A11 (which at that time was referred to as "A10" by the then-opponent; see paragraph bridging pages 8 and 9 of the letter).

The same objection was raised in the statement setting out the grounds of appeal (see second paragraph of point VI, c. on page 18).

Since the attack had already been raised in the opposition proceedings and included in the statement of grounds of appeal, it cannot be seen as an amendment to the respondent's case. By the same token, it cannot be considered as late-filed and cannot be excluded from the proceedings.

2.2 Interpretation of the added feature

- 2.2.1 Claim 1 of auxiliary request I is based on the granted claim 1 and has been supplemented with the feature of granted claim 3 that *"the size of the waste lithographic printing plates used in the metal regeneration step is from 2 to 60 cm square"*.

2.2.2 The respondent argues that the feature has to be interpreted in the light of the description, so that compression of cut pieces of waste lithographic plates before they are melted, as in A11/A11a, must be considered as standing against the technical effect achieved by the added feature, which is a reduction in melting time. Thus documents comprising such a compression step cannot be regarded as disclosing the added feature.

2.2.3 The respondent's argument is not persuasive.

Method claim 1 of auxiliary request I merely defines a size of the waste lithographic plates falling within a specific range. This does not exclude any further treatment of the (pieces of) waste lithographic plates, including compression, as in A11/A11a, before they are introduced into the melting furnace.

2.2.4 The respondent argues that the claimed range corresponds to an average size in a population of particles of varying sizes. This interpretation is confirmed by example 3 of the patent, where the expression "average size" is consistently used.

2.2.5 The Board is not convinced by the patent proprietor's interpretation, as it considers that the added feature can also be seen as providing upper and lower limits of the size of the (pieces of) waste lithographic plates to be melted.

However, in the following the patent proprietor's interpretation is taken into consideration for the discussion. Thus the claimed range is regarded as representing an average size of a population.

- 2.3 A11/A11a in combination with common general knowledge
- 2.3.1 A11 discloses preferred dimensions for the cut pieces of waste lithographic plates in a metal regeneration step. Paragraph [0043] of A11a discloses a short-side length of between 1 and 10 cm, and paragraph [0044] discloses a preferred long-side length of between 10 and 140 cm. Based on this, the appellant argues, undisputed by the respondent, that A11 discloses a size range of between 10 and 1400 cm² for the pieces of waste lithographic plates.
- 2.3.2 The respondent contends that the range of 10 to 1400 cm² discloses a specific population of pieces whose sizes are comprised between both end points of the range, i.e. not an average size. Thus A11 does not disclose the added feature.
- 2.3.3 The Board does not share the respondent's view.

The skilled person would immediately and directly derive from the examples of A11 (see paragraphs [0052] and [0058]) that waste lithographic plates are intended to be cut into pieces of substantially identical size. From this they would understand that, if a range of sizes is proposed in A11, it must be understood as a proposal for choosing a unique size within this range, i.e. an average size taking into consideration the fluctuations in the cutting dimensions.

Since the proposed range starts at 10 cm², this specific value is disclosed by A11, falling within the

claimed range between 2 and 60 cm². A11 thus discloses the added feature of claim 1 of auxiliary request I.

2.3.4 In view of the above, the subject-matter of claim 1 of auxiliary request I differs from A11/A11a only in the same features as for the main request. Consequently, the same considerations as in point 1.3.3 above are applicable here.

2.3.5 Thus the subject-matter of claim 1 does not involve an inventive step over A11/A11a when combined with common general knowledge (Article 56 EPC).

3. Auxiliary request II, inventive step - Article 56 EPC

3.1 Admission of A14, Article 12(4) RPBA 2007

3.1.1 Document A14 was filed for the first time with the statement setting out the grounds of appeal. Since the appeal was pending on 1 January 2020 and the statement of grounds was filed in due time before that date, Article 12(4) RPBA 2007 applies to the statement of grounds pursuant to Article 25(2) RPBA 2020.

3.1.2 The respondent requests that A14 not be admitted into the proceedings, because A14 could and should have been filed earlier, since it concerned the subject-matter of granted claim 4.

3.1.3 This argument is not persuasive. A14 is a manual which reflects the common general knowledge of the skilled person in the technical field of metallurgy of aluminium before the priority date of the contested patent. Its submission is merely intended to support arguments related to a discussion about the furnace type which had already been put forward in the

opposition proceedings, especially in view of claim 4 of the patent as granted, see notice of opposition, page 15, fourth paragraph. It represents a legitimate reaction in due time with the statement of grounds to the filing of auxiliary request II, which had never been discussed in the opposition proceedings.

- 3.1.4 In view of the above, A14 is admitted into the appeal proceedings.

- 3.2 Combination of A11 with common general knowledge
 - 3.2.1 Claim 1 of auxiliary request II is based on the granted claim 1 supplemented with the feature of the granted claim 4 that "*a Si free furnace whose furnace walls do not contain Si is employed as the melting furnace*".
 - 3.2.2 The respondent has not provided any arguments as to the contribution of the added feature to the inventive step of the subject-matter of claim 1.
 - 3.2.3 In the absence of any response, the Board finds the arguments of the appellant persuasive in that, since the skilled person in the technical field of aluminium regeneration is aware of the fact that furnace walls containing Si may result in contamination of the regenerated aluminium (see A14, pages 438 to 440), they would avoid using furnaces comprising walls of such composition when implementing the aluminium regeneration method disclosed in A11. Therefore the added feature cannot justify inventive step.

Thus, taking into consideration the discussion and conclusion under point 1.3.3 above, the skilled person would arrive at the claimed invention when starting

from A11 as the closest prior art in combination with their common general knowledge.

3.3 Conclusion

The subject-matter of claim 1 of auxiliary request II does not involve an inventive step (Article 56 EPC).

4. Auxiliary request III, inventive step - Article 56 EPC

4.1 Claim 1 of auxiliary request III is based on the granted claim 1 and has been supplemented with the feature of the granted claim 5 that "*the temperature for melting the waste lithographic printing plates in the metal regeneration step is 680 to 750°C*".

4.2 The respondent argues that the defined temperature range improves the balance between melting time and regeneration yield, as disclosed in example 5 of the patent.

4.3 However, this argument could only support the presence of an inventive step if the added feature represented a difference with respect to the closest prior art.

Document A4/A4a, considered as suitable closest prior art (see point 1.3.1 above), discloses a temperature of 750°C for the metal regeneration step (see A4a, paragraph [0026]). The disclosed temperature falls within the range of the added feature.

Since the only difference between the subject-matter of claim 1 and the disclosure of A4/A4a is the same as for the main request (see point 1.2.2 above), the same reasoning and conclusion as in point 1.3.2 above are applicable here. The subject-matter of claim 1 of

auxiliary request III is therefore obvious starting from A4/A4a as the closest prior art in combination with the common general knowledge of the skilled person.

- 4.4 Consequently, the subject-matter of claim 1 of auxiliary request III does not involve an inventive step (Article 56 EPC).
5. In the absence of an allowable request, the patent cannot be maintained.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Spira

G. Patton

Decision electronically authenticated