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#### Datasheet for the decision of 24 January 2024

Case Number: T 1756/21 - 3.3.05

Application Number: 15777267.4

Publication Number: 3130684

C22C21/00, C22F1/04, H01B1/02, IPC:

H01B5/02, H01B13/00, H01R13/03,

C22F1/00

Language of the proceedings: ΕN

#### Title of invention:

BUS BAR ALUMINUM ALLOY PLATE AND METHOD FOR PRODUCING SAME

#### Patent Proprietor:

UACJ Corporation

#### Opponent:

Speira GmbH

#### Headword:

BUS BAR ALUMINUM ALLOY PLATE/UACJ

#### Relevant legal provisions:

EPC Art. 123(2), 84, 83, 54 RPBA 2020 Art. 13(2)

#### Keyword:

Amendments
Claims - clarity (yes)
Sufficiency of disclosure - (yes)
Novelty - (yes)
Amendment after summons - exceptional circumstances (yes)

#### Decisions cited:

T 1076/21, T 0386/17, T 1596/16, T 1960/14, T 1085/13, T 1523/07, T 0608/07, T 0594/01, G 0003/14

#### Catchword:



# Beschwerdekammern Boards of Appeal Chambres de recours

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Case Number: T 1756/21 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 24 January 2024

Appellant: UACJ Corporation 1-7-2, Otemachi
(Patent Proprietor)

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Decision under appeal: Decision of the Opposition Division of the

European Patent Office posted on 2 August 2021 revoking European patent No. 3130684 pursuant to

Article 101(3)(b) EPC.

#### Composition of the Board:

Chairwoman O. Loizou Members: J. Roider

G. Glod

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#### Summary of Facts and Submissions

- I. The appeal by the patent proprietor lies from the opposition division's decision to revoke patent EP 3 130 684 B1.
- II. The following documents are of relevance in the decision:
  - D5/D5ct JP 2005-008926 A / English machine translation
  - D14/D14en K. Matsuda et al., J. Jap. Inst. Light Met., vol. 45, No. 2 (1995), pp. 95 100 / English machine translation
  - D15/D15en K. Matsuda et al., J. Jap. Inst. Light Met., vol. 52, No. 9 (2002), pp. 398 402 / English machine translation
  - D16/D16en K. Matsuda et al., J. Jap. Inst. Light Met., vol. 47, No. 9 (1997), pp. 493-9 / English machine translation
  - D17 M. Mageto, Al-Mg-Si Alloys: Microstructure, Hardness and Tensile Properties, ISBN-13:9783838329222
  - D18/D18en A. Hibino et al., J. Jap. Inst. Light Met., vol. 53, No. 11 (2003), pp. 534-41 / English machine translation
  - D19/D19en M. Asano et al., J. Jap. Inst. Light Met., vol. 56, No. 7 (2006), pp. 371-5 / English machine translation
  - D20/D20en T. Minoda, J. Jap. Inst. Light Met., vol. 53, No. 11 (2003), pp. 523-7 / English machine translation
  - D21/D21en K. Tokuda et al., J. Jap. Inst. Light Met., vol. 57, No. 10 (2007), pp. 444-9 / English machine translation
  - D31 Expert statement by Mr. Engler, dated 20 December 2023

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In the decision, references to documents apply to their English machine translation if they are not available in an official language.

- III. Claim 8 of the main request and of auxiliary request I reads as follows (additions with respect to claim 1 as originally filed underlined):
  - "8. A method of manufacturing an aluminum-alloy sheet for a bus bar according to any of claims 1 to 6, comprising:

preparing a sheet material having a chemical composition containing Mg: 0.3%-0.9% (mass%, likewise below), Si: 0.2%-1.2%, Cu: 0.2% or less, and Fe: 0.5% or less, the remainder being Al and unavoidable impurities;

subjecting the sheet material to a solution heat treatment;

subsequently subjecting the sheet material to a skin pass with a rolling reduction of 1%-10%; and subsequently subjecting the sheet material to an artificial-aging treatment performed at  $160\degree C-210\degree C$ ."

- IV. Claim 1 of auxiliary request II reads as follows (additions/deletions with respect to claim 1 as originally filed underlined/struck through and feature numbering A1 to A4 added):
  - Al "1. An aluminum-alloy sheet for a bus bar, comprising:

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- A2 a chemical composition containing Mg: 0.3%-0.9% (mass%, likewise below), Si: 0.2%-1.2%, Cu: 0.2% or less, and Fe: in an amount resulting in that Fe-based particles are present in the Al matrix and at a maximum Fe content of 0.5% or less, the remainder being Al and unavoidable impurities; wherein
- A3 acicular particles containing Mg and Si are present in the Al matrix at 900-4,000 particles/ $\mu m^2$ ; and
- the Fe-based particles present in the Al matrix have an average circle-equivalent diameter of 5  $\mu m$  or less, and the number of particles having a circle-equivalent diameter of more than 2  $\mu m$  is 10,000 particles/mm<sup>2</sup> or less."
- V. The key arguments of the appellant (patent proprietor) can be summarised as follows:

# Main request and auxiliary request I, Article 123(2) EPC

Paragraph [0032] of the description as originally filed provided the basis for the amendment in claim 8.

#### Auxiliary request II, Article 123(2) EPC

Paragraphs [0024] and [0011] of the description as originally filed provided the basis for the amendment in claim 1.

#### Auxiliary request II, Article 83 EPC

The patent in suit contained a number of examples and comparative examples as well as guidance for the skilled person.

#### Auxiliary request II, Article 84 EPC

The question of clarity did not have to be examined in the light of G 3/14. The subject-matter of claim 1 was

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moreover clearly defined.

#### Auxiliary request II, Article 54(1) and (2) EPC

The question of novelty could be dealt with during appeal without any difficulty, and therefore the case should not be remitted to the opposition division for examination of novelty.

D31 should not be admitted into the proceedings. The new argument relating to the rolling reduction was submitted in view of the filing of D31. The subject-matter of claim 1 was not directly and unambiguously disclosed in D5, D14, D15, D16 and D17.

VI. The key arguments of the opponent (respondent) can be summarised as follows:

## Main request and auxiliary request I, Article 123(2) EPC

Paragraph [0032] of the description as originally filed disclosed specific treatment conditions. The generalisation in the subject-matter of claim 8 was not originally disclosed.

#### Auxiliary request II, Article 123(2) EPC

A lower limit of the iron content was not disclosed in the application as originally filed.

#### Auxiliary request II, Article 83 EPC

It was not disclosed how the effects contained in claim 2 could be obtained. Moreover, the limits of claim 1 were unclear.

#### Auxiliary request II, Article 84 EPC

The subject-matter of claim 1 could not be distinguished from the prior art.

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Auxiliary request II, Article 54(1) and (2) EPC

The alternative covered by claim 1 was not dealt with in the impugned decision. The case should thus be remitted to the opposition division for examination of novelty.

The filing of D31 was a reaction to a consideration of the board raised in the preliminary opinion.

The new argument relating to the rolling reduction should not be admitted into the proceedings.

D5, D14, D15, D16 and D17 anticipated novelty of claim 1.

#### VII. Requests with regard to substance:

- (a) The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained in amended form based on the main request, or in the alternative on the basis of one of auxiliary requests I - XIII, all filed with the statement of grounds of appeal.
- (b) The respondent (opponent) requested that the appeal be dismissed.

#### Reasons for the Decision

1. Main request and auxiliary request I

The subject-matter of claim 8 contains the feature (underline added by the board) "... subsequently subjecting the sheet material to an artificial-aging treatment performed at 160°C-210°C".

The feature was added to the independent method claim 3 as originally filed, now claim 8, during the

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examination phase.

1.1 Amendments, Article 123(2) EPC

Irrespective of the question of the admission of the main request into the appeal proceedings, the subject-matter of claim 8 extends beyond the application as originally filed.

1.1.1 The appellant cites paragraph [0032] of the original disclosure as the basis for the amendment. It reads (underline added by the board):

"[0032] After the skin pass, an artificial-aging treatment is performed on the sheet material. The treatment conditions of the artificial-aging treatment should be conditions in which the above-specified metallographic structure is obtained, and are preferably conditions in which, in addition to the above-specified metallographic structure, tensile strength and electrical conductivity in the abovespecified ranges are obtained. Specifically, the treatment conditions below can be used. First, the sheet material is heated until it reaches a prescribed temperature. The temperature reached by the sheet material at this time is preferably set to within the range of 160°C-210°C. After the sheet material has reached the prescribed temperature, the heating may be terminated immediately, or the heating may be terminated after the sheet material has been held at the prescribed temperature for a fixed time. If the temperature of the sheet material is held, then the hold time is preferably set to 30 hours or less."

1.1.2 There are thus two possible processes disclosed for obtaining the metallographic structure:

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Heating to a prescribed temperature within the range of  $160^{\circ}\text{C}-210^{\circ}\text{C}$  and terminating the heating either (1) immediately after the prescribed temperature is reached or (2) after holding the prescribed temperature for a fixed time.

The subject-matter of claim 8 merely requires that the heat treatment be performed in a temperature range of 160°C-210°C, irrespective of the time pattern of the heat treatment process. It covers for example further heating after reaching or holding the prescribed temperature. It also covers a prescribed temperature above the claimed range because heating and cooling the sheet material would then involve a transition through the claimed temperature range.

However, the application as originally filed does not disclose such processes in combination with the claimed temperature range.

The subject-matter of claim 8 of the main request thus does not meet the requirements of Article 123(2) EPC.

The same deficiency also applies to auxiliary request I.

- 2. Auxiliary request II
- 2.1 Amendments, Article 123(2) EPC
- 2.2 According to the appellant, paragraphs [0024] and [0011] of the application as originally filed provide the basis for the amendment in feature A2.

Paragraph [0011] reads (the half-sentence referred to by the appellant in the statement of grounds of appeal

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is underlined):

"[0011] In addition, the acicular particles, which contain Mg and Si in the Al matrix, are necessarily included in the aluminum-alloy sheet, and the number of the acicular particles is kept within the above-specified range. Furthermore, if the Fe-based particles derived from Fe are included in the Al matrix, then the particle-size distribution of the Fe-based particles is kept within the above-specified range. Thus, in addition to the above-specified chemical composition, the aluminum-alloy sheet has a metallographic structure that is finely controlled as mentioned above, and thereby, as compared with a conventional 6000-series aluminum alloy sheet, tends not to crack during bending and has excellent bendability."

This paragraph thus discloses the alternative that Febased particles derived from Fe are included in the aluminum matrix.

Paragraph [0024] moreover discloses that (underline added by the board): "It is noted that it is also possible to compose the aluminum-alloy sheet such that it does not contain Fe-based particles by a method of, for example, making the chemical composition such that it does not contain Fe."

This also discloses the possibility of composing the aluminum-alloy sheet such that it  $\underline{\text{does}}$  contain Fe-based particles by making the chemical composition such that it does contain Fe.

Paragraphs [0011] and [0024] therefore disclose a first alternative according to which Fe-based particles are present and a second alternative according to which Fe-based particles are not present in the aluminum-alloy

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sheet.

The disputed amendment excludes the second alternative because it merely requires the presence of Fe-based particles in the aluminum-alloy sheet.

The respondent argued that the amendment resulted in the definition of a lower limit of the content of iron in the alloy. A lower limit was however not disclosed in the application as originally filed. There was no causality between the iron content and the occurrence of Fe-based particles.

The presence of Fe-based particles implies the presence of iron in an amount such that Fe-based particles can occur. The disputed definition does not provide a different scope other than the mere requirement that Fe-based particles be present. It is not an additional requirement as alleged by the respondent.

Claim 1 is directed to an aluminum-alloy sheet with Febased particles. It is not directed to an aluminum-alloy which can precipitate Fe-based particles when processed into a sheet.

The presence of Fe-based particles in the aluminumalloy sheet implies, irrespective of other alloying elements or the thermomechanical history, that enough iron is contained in the aluminum alloy such that, when processed into a sheet, Fe-based particles are formed.

Also, very small quantities of very small iron particles are obviously covered by the disputed restriction. However, the original disclosure provides a basis for this broad coverage because paragraph [0011] merely refers to the presence of iron-based particles.

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The question of whether the skilled person is able to assess whether the aluminum-alloy sheet contains Febased particles is not an issue to be assessed under Article 123(2) EPC.

The requirements of Article 123(2) EPC are thus met.

- 2.3 Sufficiency of disclosure, Article 83 EPC
- 2.4 The respondent argued that the patent in suit was insufficiently disclosed because it did not teach how to obtain the tensile strength of at least 170 MPa and the electrical conductivity of 55% IACS or higher claimed in claim 2. If the material claimed in claim 1 did not inevitably lead to the material properties claimed in claim 2, the patent in suit did not provide sufficient information on how to obtain them.

The patent in suit contains a number of examples and comparative examples. From these examples the skilled person has an indication of the amount of iron which provides Fe-based particles. There is no need to establish the minimum amount of iron which ensures the formation of Fe-based particles. The patent also provides guidance on how to change the content of alloying elements and production steps if a certain parameter (strength, electrical conductivity, particle number etc.) is not achieved (see paragraphs [0015] to [0031]).

The respondent did not provide any evidence that this guidance was insufficient for the skilled person to implement the invention over substantially the entire claimed range (see  $\underline{\text{T } 1076/21}$  point 1.1.7;  $\underline{\text{T } 1596/16}$  Point 2.2).

2.5 The respondent further argued that the limits of the claims were unclear, such that the skilled person did not know whether they were working inside or outside the claimed range. It was not possible to distinguish iron particles from other particles by image analysis, so it was not possible to verify whether the skilled person was working within the claimed range or not. This also applied to the solid solution limit, which was not disclosed in the patent in suit at all, but allegedly constituted the lower limit of the formation of iron particles. The skilled person could also not determine the minimum amount of iron required to yield Fe-based particles.

Neither the claims nor the description refer to a solid solution limit. The patent refers to the presence of iron particles. There is no evidence that the presence of iron particles could not be determined. Nor is there any evidence on file that the iron particles cannot be distinguished from other particles. Even if they could indeed not be distinguished, there is no evidence on file showing that this would result in an uncertainty which is not confined to the limits of the claimed ranges.

For an insufficiency arising out of an alleged ambiguity, it is not enough to show that an ambiguity exists, it is necessary to show that the alleged ambiguity deprives the skilled person of the promise of the invention. The respondent did not provide any evidence to that effect ( $\frac{T}{1960/14}$  point 5.2.4;  $\frac{T}{608/07}$  point 2.5.2)

Sufficiency of disclosure is acknowledged.

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- 2.6 Clarity, Article 84 EPC
- 2.6.1 The patent proprietor argued that both alternatives were contained in the subject-matter of claim 1 of the granted patent. The deletion of one alternative merely restricted the claim to the other alternative. The alternative did not have to bebe examined under Article 84 EPC.

According to G 3/14 (Catchword), the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC.

The added feature is intended to exclude the second alternative as outlined in the assessment under Article 123(2) EPC. The delimitation between the two alternatives was not contained in the claims as granted.

The mere fact that the subject-matter of claim 1 as granted covered both alternatives does not exclude examination of the definition which attempts to delimit the two alternatives under Article 84 EPC.

The amendment may thus be examined under Article 84 EPC.

2.6.2 It is undisputed that an absolute numerical value of the iron content for the formation of iron-based particles cannot be defined because the formation of iron particles depends not only on the iron content but also on the other alloying elements and the thermomechanical history.

Therefore some specific alloys with a low iron content, falling within the claimed chemical composition, may not result in an aluminum-alloy sheet containing Fe-

based particles.

This is however irrelevant for claim 1 because it is a product claim.

It does not require a specific starting material. The skilled person can verify the presence of iron-based particles in the product, the aluminum-alloy sheet. No evidence to the contrary is on file. If the aluminum-alloy sheet contains iron-based particles, the amount of iron present in the alloy is enough to form iron-based particles.

The said definition of the delimitation between the two said alternatives is thus clear.

2.6.3 The respondent argued that the skilled person was not able to determine the limits of the claim if the aluminum-alloy sheet contained only a few Fe-based particles. The skilled person could use a scanning electron microscope (SEM) or a transmission electron microscope (TEM) to determine the presence of an Fe-based particle. However, the detectable particle size depended on the chosen parameters for operating these apparatuses. Moreover, the few Fe-based particles were distributed over the whole aluminum-alloy sheet, and there was a high chance that the analysed area did not contain an Fe-based particle, while other areas did. The skilled person could thus not reproducibly determine the limits of the claim.

The boards in cases  $\underline{T}$  594/01 (reasons 4.1.5) and  $\underline{T}$  386/17 (reasons 2.8) were of the opinion that a parameter defined by the range "larger than zero" could not be distinguished from the parameter "equal to zero". This was exactly the issue in the present case.

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The respondent argued that X-ray diffraction (XRD) was not suitable for detecting only a few Fe-based particles. XRD is thus not considered herebelow.

The appellant argued that the aluminum-alloy sheet contained either a clearly detectable number of iron particles or no iron particles at all. It was not reasonable to assume that only some Fe-based particles appeared in the entire aluminum-alloy sheet.

It was not argued that the detection limit for a given Fe-based particle was different in SEM than in TEM, but rather that, due to the small area which can be analysed by TEM or SEM, it was not possible to analyse the entire aluminum-alloy sheet.

In the board's view, the extreme situation described by the respondent, in the absence of evidence to the contrary, is speculative without practical relevance. The board thus considers that the skilled person can verify the presence of Fe-based particles.

Moreover, in cases where no Fe-based particles were detected in a first measurement, the skilled person would not consider analysing the whole aluminum-alloy sheet as alleged by the respondent.

They would at most consider analysing a sample of areas. Sampling is a standard procedure in cases where it is impossible to analyse the whole entity. There is a certain chance that the result obtained by measuring only a sample of areas would be wrong. However, the skilled person would accept this uncertainty to be the detection limit of the measurement method.

T 594/01 and T 386/17 are related to the question of novelty. The boards in those cases considered that a

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range which distinguishes from a value disclosed in prior art only in that it is smaller or larger than that value is anticipated by that prior art in view of the measurement error.

This is not a question of clarity and is therefore irrelevant to the case at hand.

#### 2.7 Remittal (Article 111(1) EPC)

The respondent, by letter dated 20 December 2023, requested remittal of the case for assessment of Article 54(1) and (2) EPC.

It is the boards' settled case law that parties do not have a fundamental right to have their case examined at two levels of jurisdiction. Art. 111(1), second sentence, EPC leaves it to the board's discretion to decide on an appeal either by exercising any power conferred on the department of first instance or by remitting the case to that department. In choosing what to do, the board must consider the circumstances of the individual case, also bearing in mind other factors such as the need for procedural economy (Case Law of the Boards of Appeal, 10th edn., (2022), V.A.9.2.1).

The decision under appeal includes an assessment of novelty (Article 100(a) EPC / Article 54(1) and (2) EPC). However, the decision under appeal covered only the aspect of an iron-free alloy, while claim 1 of auxiliary request II requires an alloy containing iron. Nevertheless, the parties did submit their arguments on the question of novelty of claim 1 of auxiliary request II with the grounds of appeal and the reply thereto, respectively. Article 54(1) and (2) EPC was also covered in detail in the board's preliminary opinion.

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Deciding on Article 54(1) and (2) EPC thus does not place an undue burden on either the parties or the board. Moreover, remitting the case for examining novelty as well would be against procedural economy.

The request to remit the case at issue for examining novelty as well is thus refused.

#### 2.8 Novelty, Article 54(1) and (2) EPC

The respondent considered D5, D14, D15, D16 and D17 as anticipating novelty of claim 1.

For the assessment of novelty, D31, a new document, was cited by the respondent. The appellant relied on a new argument.

The admission of these was challenged by the respective opposing party.

#### 2.8.1 Admission of D31

The appellant requested that D31, a statement by an expert employed by the respondent, filed after the notification of the summons to oral proceedings, not be admitted.

The respondent argued that the expert statement (D31) was filed because of a new argument raised in the preliminary opinion of the board in view of paragraph [0032] of the patent in suit.

It was to establish that Fe-based particles appeared during the casting process (cast phases), much smaller Fe-based particles appeared during the homogenisation heat treatment, while no Fe-based particles were formed during artificial aging. By referring to the

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metallographic structure obtained by the artificial aging (paragraph [0032] of the patent in suit), a change in the number density or morphology of Fe-based particles was not implied.

It is acknowledged that the preliminary opinion of the board referred to the metallographic structure in paragraph [0032] for the first time in the proceedings. It is thus accepted that there are exceptional circumstances, which the respondent has justified by cogent reasons.

Document D31 is thus admitted into the proceedings (Article 13(2) RPBA 2020).

#### 2.8.2 Admission of a new argument

The appellant argued during the oral proceedings that if not the artificial aging, in any case the rolling reduction, had an influence on the size of the Fe-based particles. High deformation during rolling reduced the size of the Fe-based particles. In the patent in suit, the rolling reduction exceeded 99.6% (paragraph [0034] of the patent in suit).

This new argument is also a reaction to the preliminary opinion which referred to paragraph [0032]. It is moreover a reaction of the appellant to the filing of D31 by the respondent.

The new argument is thus admitted into the proceedings (Article 13(2) RPBA 2020).

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#### 2.8.3 Novelty over D5

D5 does not explicitly disclose features A3 and A4. Contrary to the respondent's allegation, features A3 and A4 are not implicitly disclosed either.

By referring to paragraph [0013] of the patent in suit, the respondent argued that features A3 and A4 were inevitably obtained if produced by the process disclosed in the patent in suit. D5, particularly examples 10 and 11, disclosed the same process. Since chromium and titanium were impurities, the chemical composition of the alloy of D5 was identical to that of the claimed alloy. Therefore the claimed subject-matter was implicitly disclosed.

According to the respondent's expert (D31), the homogenisation heat treatment spheroidised the cast phases. The Fe-based particles which were precipitated during homogenisation heat treatment were substantially smaller than the cast phases. The processes following the homogenisation treatment did not change the types, sizes or volumes of the cast phases. However, a high rolling reduction changed the shape of the cast phases (D31, page 2, first full paragraph).

The appellant argued that the chromium and titanium content in D5, also in examples 10 and 11, particularly referred to by the respondent, were alloying elements and not mere impurities. A high rolling reduction moreover reduced the size of the Fe-based particles. The patent in suit (paragraph [0034]) disclosed a higher rolling reduction than D5 on page 6.

There is no evidence, e.g. tests on file, supporting the allegation of an implicit disclosure. - 19 - T 1756/21

The examples in D5 are not identical to what is disclosed in the patent in suit. This includes first and foremost the alloy composition. The examples, which fall within the claimed ranges of Fe, Si, Mg and Cu, also include at least Cr and Ti. Examples 10 and 11, particularly referred to by the respondent, also contain 0.05% Cr and 0.002% Ti. Purely in view of their concentration, they may be considered to constitute impurities. Whether the influence of Cr and Ti on features A3 and A4 can be neglected when contained in the alloy in these amounts is however not clear.

Further differences are the rolling reduction and also e.g. the soaking times and temperatures for the homogenisation treatment  $(550^{\circ}\text{C for }12 \text{ hours v. } 560^{\circ}\text{C}$  for 8 hours in D5).

It is acknowledged that the difference between most of these parameters could be considered insignificant.

However, an impact on features A3 and A4 due to the combination of all these differences cannot entirely be ruled out. Features A3 and A4 must be considered as a limitation of the claimed subject-matter and not the inevitable result that is always achieved when producing the aluminum-alloy sheet by the broadly-disclosed manufacturing process.

It can therefore not be assumed that features A3 and A4 are the clear and unambiguous consequence of what is explicitly mentioned in D5 ( $\underline{T}$  1085/13, point 3.6.2;  $\underline{T}$  1523/07, point 2.4).

The subject-matter of claim 1 is to be considered novel over D5.

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#### 2.8.4 Novelty over D14, D16 and D17

None of these documents discloses an alloy comprising iron.

The respondent argued that iron was a common impurity in aluminum alloys. It must hence be assumed that there was a certain amount of iron contained in the alloy.

The iron content of the aluminum base used for these alloys is unknown. Whether iron is contained in the alloy amounts to speculation and moreover does not allow any conclusion about the presence of Fe-based particles in the aluminum-alloy sheet.

The subject-matter of claim 1 is considered novel over D14, D16 and D17.

#### 2.8.5 Novelty over D15

D15 is directed to Al-Mg-Si alloys. The respondent referred to alloys 2 and 4 in Table 1. They have an Si, Fe, Cu and Mg content within the claimed range.

The appellant argued that the chemical composition of these alloys also included Mn and Zn.

The respondent argued that both Mn and Zn were unavoidable impurities. Feature A3 was satisfied as apparent from Fig. 5 (see points representing alloys 2 and 4). The low iron content implied that feature A4 was satisfied. The upper limit in feature A4 was so high that it was achieved using standard manufacturing processes, as apparent in D18-D21. These all contained aluminum-alloy sheets with an aluminum alloy of the claimed chemical composition which complied with the

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condition in feature A4 (D18, Table 1, alloys S1 and F2, Fig. 6; D19, Table 1, line 1, Fig. 4; D20, abstract, Fig. 9; D21, Table 1, line 1, Fig. 1). Requiring the mere presence of Fe-based particles was moreover not a sensible delimitation from the prior art.

In view of the figures provided by the appellant in the statement of grounds of appeal on page 14, the iron content exceeds the solid solution limit such that the presence of iron particles is considered disclosed in D15. In view of Fig. 5 of D15, showing the points representing alloys 2 and 4, feature A3 is also disclosed.

Feature A4 is neither explicitly nor implicitly disclosed in D15.

There is no evidence, for example tests on file, supporting the allegation of an implicit disclosure.

It is acknowledged that production methods of the example in documents D18 to D21 referred to by the opponent show that the average circle-equivalent diameter is 5  $\mu m$  or less and the particles having a circle-equivalent diameter of more than 2  $\mu m$  are 10,000 particles/mm² or less.

It is acknowledged that the difference between most of these parameters could be considered to be insignificant.

The question is whether, in view of the teaching in D18-D21, feature A4 is the clear and unambiguous consequence of what is explicitly mentioned in D15.

The Mn and Zn content in alloys Nos. 1, 2, 4 and 5 of

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D15 is very low. It is disputed whether Mn and Zn are alloying elements or impurities. Considering that they are explicitly indicated in D15, it is possible that Mn and Zn have an impact on the alloy, particularly on feature A4.

Moreover, the rolling reduction is not disclosed in D15 and the alloys in D18-D21 are not identical to the alloy in D15. It is thus not entirely clear that the results in D18-D21 can be directly and unambiguously transferred to D15.

In the absence of evidence to the contrary, the subject-matter of claim 1 must hence be considered novel over D15.

- 2.8.6 Auxiliary request II thus meets the requirements of Article 54(1) and (2) EPC.
- 2.9 Auxiliary request II meets the requirements of Article 123(2) EPC, Article 84 EPC and Article 54(1) and (2) EPC.

The impugned decision does not include a decision on the presence of an inventive step (Article 56 EPC).

As expressed in Article 12(2) RPBA 2020, the primary object of the appeal proceedings is to review the decision under appeal in a judicial manner. It is therefore not the function of the board to consider and decide on Article 56 EPC, in particular in view of the documents cited for the first time in appeal proceedings. The board therefore acknowledges special reasons for the remittal as required under Article 11 RPBA 2020.

The board therefore remits the case to the opposition

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division (Case Law of the Boards of Appeal of the EPO, 10th edn., (2022), V.A.9.3.2) for further prosecution.

#### Order

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

- 1. The decision under appeal is set aside.
- 2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairwoman:



C. Vodz O. Loizou

Decision electronically authenticated