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**Datasheet for the decision
of 20 February 2020**

Case Number: T 1490/17 - 3.3.05

Application Number: 02758588.4

Publication Number: 1425430

IPC: C22C21/00, C22C21/10, B41N1/08

Language of the proceedings: EN

Title of invention:
AI ALLOY FOR LITHOGRAPHIC SHEET

Patent Proprietor:
Novelis Inc.

Opponent:
Hydro Aluminium Deutschland GmbH

Headword:
Al alloy for lithographic sheet/NOVELIS

Relevant legal provisions:
EPC Art. 54(1), 54(2), 56, 83, 123(2)
RPBA Art. 12(4)

Keyword:

Amendments - added subject-matter (no)

Sufficiency of disclosure - (yes)

Novelty - main request (yes)

Inventive step - main request (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1490/17 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 20 February 2020

Appellant: Novelis Inc.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 24 May 2017
revoking European patent No. 1425430 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman E. Bendl
Members: A. Haderlein
P. Guntz
S. Besselmann
S. Fernández de Córdoba

Summary of Facts and Submissions

- I. The appeal was filed by the patent proprietor (appellant) against the decision of the opposition division to revoke the patent in suit.
- II. The opposition division decided *inter alia* that the first auxiliary request on which the decision is based complied with the requirements of Articles 123(2) and 83 EPC. The subject-matter of claim 1 of this request was found to be novel in view of
- F2: Excerpt from "Aluminium-Taschenbuch", Vol. 1, 15th ed. 1998, page 599
- F3: Aluminium and Aluminium Alloys (1993), page 20, and
- G1/G1b: JP 03 177 528 A and German translation thereof, submitted by letter received on 20 December 2013,
- and inventive over
- G12: US 5 395 489 A,
- but lacked an inventive step when starting from the following closest prior art:
- G2: EP 0 942 071 A1.
- III. The opposition division also held that the corrections made to the description of the patent and submitted during oral proceedings, in particular corrected Table 1, were not objectionable.

IV. With the statement setting out the grounds of appeal, the appellant requested in the alternative *inter alia* that the patent be maintained on the basis of one of auxiliary requests VIII to X, which corresponded to the first to third auxiliary requests on which the decision under appeal was based.

V. With its submissions dated 16 December 2019, the appellant changed the numbering of these auxiliary requests so that they became the main request and auxiliary requests I and II.

VI. Claim 1 of the main request reads as follows:

"1. An Al alloy suitable for processing into a lithographic sheet, the alloy having a composition in wt%:

Fe	up to	0.4
Si	up to	0.25
Ti	up to	0.05
Cu	up to	0.004
Zr	up to	0.005
Cr	up to	0.004
Ni	up to	0.006
V	0.013 to	0.03
Zn	0.013 to	0.15
Mg	up to	0.30
Mn	up to	1.5

Unavoidable impurities up to 0.05 wt% each, 0.15 wt% total

Al balance, and wherein the Zn/V ratio is at least about 0.6."

Claims 2 to 11 are directed to particular embodiments of the alloy according to claim 1 or a lithographic sheet formed from such an alloy. Claim 12 is directed

to the use of such an alloy. Claims 13 to 15 are directed to methods for processing such an alloy.

VII. The arguments of the appellant, where relevant to the present decision, may be summarised as follows:

The subject-matter of claim 1 of the main request complied with the requirements of the EPC. In particular, it was not obvious to arrive at such subject-matter when starting from alloy C of G2.

VIII. The arguments of the opponent (respondent), where relevant to the present decision, may be summarised as follows:

The main request should not be admitted into the proceedings. The amendments carried out with respect to Table 1 did not comply with Article 123(2) EPC. While these amendments were disclosed in the application documents as filed, they were not present in the application as published.

Table 2 of the patent in suit showed that claim 1 covered embodiments in which the improvement referred to in the patent did not occur. Thus, there was a lack of sufficiency of disclosure.

There was also a lack of novelty in view of G1/G1b, F2 and F3. In particular, the claimed subject-matter amounted to a selection from a broader range. The criteria for such a selection, established by the case law of the Boards of Appeal, were not met.

The closest prior art was represented by alloy C in Table 1 of G2. It was obvious to arrive at the claimed subject-matter, for the following reasons: G12 taught

improving the graining conditions by a Zn content as claimed; the Ni content was only slightly different from that of alloy C in G2; and the copper content was already taught in G2.

IX. Requests

The appellant requests that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the claims of the main request filed with its submissions dated 16 December 2019 or, alternatively, on the basis of the claims of auxiliary requests I and II filed with the same submissions.

The respondent requests that the appeal be dismissed.

X. In response to the board's communications dated 22 November 2019 and 10 December 2019 indicating that the patent could be maintained on the basis of the then 8th auxiliary request (which has now become the main request), both parties withdrew their requests for oral proceedings.

Reasons for the Decision

MAIN REQUEST

1. Admission

The respondent objects to the admission of the main request. As this request corresponds to the first auxiliary request on which the impugned decision is based, there is no reason to hold this request inadmissible (Article 12(4) RPBA 2007).

2. Amendments

2.1 The sole contentious issue under Article 123(2) EPC is amended Table 1 (see III above). While the respondent does not contest that this Table 1 appears in the originally filed documents, it contends that the amendment goes beyond the content of the application as published.

This argument is not persuasive. For the amendments to comply with the requirement of Article 123(2) EPC, what matters is whether they go beyond the content of the application as filed. Whether they allegedly go beyond the content of the application as published is not relevant in this context.

2.2 The remaining amendments to the claims and the description are not objected to by the respondent. Moreover, the opposition division held that claim 1 of this request fulfilled the requirement of Article 123(2) EPC (see decision under appeal, second half of page 16). The board agrees that there is no reason to find them objectionable under this provision.

2.3 For the above reasons the amendments are allowable (Article 123(2) EPC).

3. Sufficiency of disclosure

3.1 The respondent essentially argues that the results presented in Table 2 showed that the improvement referred to in the patent did not occur over the whole scope claimed.

3.2 The board notes, however, that none of the claims of the main request contains such an improvement, i.e.

this effect is not claimed. As the alloy specified in claim 1 can undoubtedly be produced, there is no issue of insufficiency of disclosure. Whether the effect relied upon in the patent occurs over the whole scope claimed may be relevant to the discussion on inventive step (see Reasons 5.5 below), but not to sufficiency.

3.3 Thus, the requirement of Article 83 EPC is met.

4. Novelty

4.1 According to the respondent, the subject-matter of claim 1 is not novel in view of G1 (reference will be made to G1b), the standard alloys AA1050/AA1050A (see F2) and AA1385 (see F3).

4.2 The skilled person would need to make several selections from the ranges disclosed in G1b (page 6), as correctly held by the opposition division (see appealed decision, page 19, first full paragraph). For instance, for Fe the lower limit of 0.1%, for Si the lower limit of 0.03% and for Cu the lower limit of 0.001% of the ranges disclosed in G1b would need to be selected. Moreover, in relation to the Zn content the respondents referred to page 9, second full paragraph of G1b; but in that paragraph it is stated that impurities such as Zn "may" be present. This means that there is no unambiguous disclosure of Zn being necessarily present in an amount falling within the boundaries of claim 1. Moreover, there is only one alloy (alloy K) in Table 1 which has a Zn content falling within the claimed boundaries. However, uncontestedly this sample does not comprise the remaining components in the required amounts (for instance, the Si content is 0.4%, i.e. above the required maximum amount of 0.25%).

It follows from the above that G1/G1b does not disclose directly and unambiguously an alloy having a composition falling within the claimed boundaries. The subject-matter of claim 1 is thus novel over G1/G1b.

- 4.3 Concerning F2, the AA1050 and AA1050A alloys contain up to 0.05% Cu, whereas according to claim 1 this value is at most 0.004%, i.e. more than a factor of 10 below the maximum value disclosed in F2. There is thus no direct and unambiguous disclosure of a value falling within the claimed range. The case law referred to by the respondent in this context relates to selections of a smaller range with explicitly specified end points from a larger range encompassing the smaller range and also having explicitly specified end points, all end points being different from 0. Thus, this case law does not apply in the present case.

The subject-matter of claim 1 is also novel over F2, at least for these reasons.

- 4.4 F3 does at least not disclose the V content. The indication of 0.02% (V+Ti) for AA1385 is not sufficient to disclose directly and unambiguously an amount of V falling within the claimed range of 0.013 to 0.03%. For the same reasons, F3 does not disclose the claimed Zn/V ratio. The subject-matter of claim 1 is thus also novel over F3.

- 4.5 It follows from the above that the requirement of novelty is met (Article 54(1) and (2) EPC).

5. Inventive step
 - 5.1 The invention relates to an Al alloy suitable for processing into a lithographic sheet.
 - 5.2 It is common ground that alloy C in Table 1 of G2 is the closest prior art. The subject-matter of claim 1 differs from that alloy by a lower Cu content, a lower Ni content, a higher Zn content and a higher Zn/V ratio.
 - 5.3 The problem to be solved is to provide improved graining conditions (see paragraphs [0002] and [0008] and Table 2 of the patent).
 - 5.4 According to claim 1 it is proposed to solve this problem by an Al alloy characterised by a Cu content of up to 0.004%, an Ni content of up to 0.006%, a Zn content of 0.013 to 0.15% and a Zn/V ratio of at least about 0.6.
 - 5.5 As to the success of the solution, it is noted that claim 1 does not cover the embodiment depicted in the "0.008" column of Table 2 but only those on the right-hand side thereof, as the minimum Zn content is defined as 0.013%. Secondly, the Zn/V field of 0.003%/0.014%, showing "inadequate graining morphology", appears to correspond to the Zn/V values of alloy C of G2, i.e. the latter alloy has the same Zn and V contents. Thus, in the absence of evidence to the contrary, it is concluded that the alloy C of G2, i.e. the closest prior art, shows inadequate graining conditions, as evidenced by Table 2 of the patent. Conversely, the embodiments covered by claim 1 show at least "adequate graining conditions". Hence, the proposed solution leads to improved "graining conditions" with respect to

the closest prior art. Whether these conditions are only "adequate" with respect to another alloy disclosed in the patent is not relevant here. Hence, the suggested solution solves the problem posed and there is no need to reformulate the problem.

- 5.6 As to obviousness, G12 clearly teaches the use of Zn in an amount of 0.01 to 0.5% (see claim 1) and in particular 0.1% (see table in column 4 and example 2) or 0.025% (example 8ii)) to solve the above problem (see column 2, lines 17 to 20 and 26 to 41). However, on applying this teaching to the alloy C of G2, the skilled person would still not arrive at the claimed alloy, in particular because the Cu content would be too high (0.011% in alloy C of G2 compared to a maximum of 0.004% according to present claim 1). Considering the problem to be solved (which is more ambitious than the simple provision of an alternative alloy) and considering that alloy C of G2 apparently gives "uniform pit shapes, no streak patterns and uniformity in appearance" (see Table 3 and paragraph [0085] of G2), the skilled person, while having increased the Zn content as taught in G12, would thus not have decreased the Cu content to an amount of as low as 0.004%, a value below which "the pit size becomes excessively small" according to G2 (see paragraph [0032]). The skilled person would thus not have expected adequate graining behaviour at such low Cu content, in contrast to the results obtained in the patent in suit. They would thus not see any incentive to change the Cu content of alloy C of G12 or, at least, would not bring it close to 0.004%. Moreover, the skilled person would still have to lower the Ni content from 0.008% to 0.006%.

For the above reasons, it was not obvious to arrive at

the subject-matter of claim 1.

5.7 The same reasons apply to the subject-matter of the remaining claims, which refer back to claim 1.

5.8 Therefore, the main request meets the requirement set forth in Article 56 EPC.

6. With respect to the fact that an adapted description was only submitted on 19 February 2020 and that the respondent has not submitted a response, the Board deems it appropriate to remit the case to the opposition division for the description to be adapted.

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 with the order to maintain the patent on the basis of the claims of the main request filed with the appellant's submissions dated 16 December 2019 and a description adapted thereto.

The Registrar:

The Chairman:



A. Chavinier-Tomsic

E. Bendl

Decision electronically authenticated