

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 9 February 2017**

Case Number: T 1390/15 - 3.2.08

Application Number: 04789094.2

Publication Number: 1673484

IPC: C22C21/16

Language of the proceedings: EN

Title of invention:

ALUMINUM-COPPER-MAGNESIUM ALLOYS HAVING ANCILLARY ADDITIONS OF LITHIUM

Patent Proprietor:

Arconic Inc.

Opponents:

Constellium France/C-TEC Constellium
Technology Center
Aleris Rolled Products Germany GmbH

Headword:

Relevant legal provisions:

EPC Art. 100(c), 123(2)

Keyword:

Grounds for opposition - added subject-matter (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1390/15 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 9 February 2017

Appellant: Arconic Inc.
(Patent Proprietor) Pittsburgh Corporate Center
201 Isabella Street
Pittsburgh, PA 15212-5858 (US)

Representative: Lenzing Gerber Stute
PartG von Patentanwälten m.b.B.
Bahnstraße 9
40212 Düsseldorf (DE)

Respondent: Constellium France/C-TEC Constellium
(Opponent 1) Technology Center
40-44, rue Washington
75008 Paris (FR)

Representative: Constellium - Propriété Industrielle
C-TEC Constellium Technology Center
Propriété Industrielle
Parc Economique Centr'Alp
725, rue Aristide Bergès
CS10027
38341 Voreppe (FR)

Respondent: Aleris Rolled Products Germany GmbH
(Opponent 2) Carl-Spaeter-Strasse 10
56070 Koblenz (DE)

Representative: Müller Schupfner & Partner
Patent- und Rechtsanwaltspartnerschaft mbB
Bavariaring 11
80336 München (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 12 May 2015**

revoking European patent No. 1673484 pursuant to
Article 101(3)(b) EPC.

Composition of the Board:

Chairman I. Beckedorf
Members: M. Alvazzi Delfrate
 M. Foulger

Summary of Facts and Submissions

I. By its decision posted on 12 May 2015 the opposition division revoked European patent No. 1 673 484. All the requests then on file were found to comprise added subject-matter, contrary to the requirements enshrined in Article 100(c)/Article 123(2) EPC.

II. The appellant (patent proprietor) lodged an appeal against this decision in the prescribed form and within the prescribed time limits.

III. Oral proceedings before the Board of Appeal were held on 9 February 2017. At the end of the oral proceedings, for the course of which reference is made to the minutes, the requests were as follows:

The appellant requested that the decision under appeal be set aside and that the case be remitted to the opposition division on the basis of the main request (patent as granted).

The respondents (opponent O1 and O2) requested that the appeal be dismissed.

IV. Claim 1 as granted reads as follows:

"An aluminium alloy consisting of
from 3 to 5 weight percent Cu,
from 0.5 to 2 weight percent Mg,
from 0.01 to 0.8 weight percent Li,
from 0.05 to 0.5 weight percent Ag,
at least one dispersoid-forming element selected from
chromium, vanadium, titanium, zirconium, manganese,
nickel, hafnium, scandium and rare earth elements,
wherein the at least one dispersoid-forming element is

present in a total amount up to 1.0 weight percent of the alloy,
optionally from 0.05 to 2 weight percent zinc,
the balance being aluminium and impurities."

V. The following documents played a role for the present decision:

D17: WO -A- 94/05820;

D22: Extract from International Alloy Designations and Chemical Composition Limits for Wrought Aluminum and Wrought Aluminum Alloys, (January 2015), pages 2-3; and

P1: Extract from Aluminum Properties and Physical Metallurgy, (1984), pages 230, 231, 236, 237.

VI. The arguments of the appellant may be summarised as follows:

The subject-matter of claim 1 was disclosed in the application as originally filed.

It was true that originally filed claim 1 comprised, unlike present claim 1, a limitation of the Cu and Mg total content in respect of a solubility limit of the alloy. However, in present claim 1 the contents of Cu and Mg were limited in accordance with the disclosure in paragraph [0030] of the application, which did not mention any further limitation on the solubility limit.

Furthermore, the application as originally filed disclosed the addition of at least one dispersoid-forming element selected from chromium, vanadium, titanium, zirconium, manganese, nickel, iron, hafnium, scandium and rare earth elements in a total amount up to 1.0%. It was true that in present claim 1 this list

did not comprise iron. In the application as originally filed it was clearly contemplated that some of these elements, in particular iron, could be omitted. In fact, the person skilled in the art would recognise that the contents of Fe and Si for the inventive examples in table 2 were not in the range for a purposive addition but rather to be seen as impurities. Fe amounts up to 0.04% were not suitable to produce dispersoids, as shown by P1. Hence, such amounts would not be considered as dispersoid-forming elements but as impurities and they would not have any influence on the total content of dispersoid-forming elements. Therefore, although the dispersoid-forming elements of present claim 1 did not comprise Fe, said elements were disclosed in the application as filed.

Finally, the application as filed also disclosed in paragraphs [0024] and [0038]-[0042] that the composition was a closed one and comprised Ag and optionally Zn, as stipulated by present claim 1.

VII. The arguments of the respondents may be summarised as follows:

In the application as originally filed the condition of the solubility limit and the content of Mg and Cu was an essential requirement. Moreover, it was not a result only of the Mg and Cu contents of present claim 1 but represented an additional limitation, as shown in Figure 1. Thus, the omission of this condition in present claim 1 represented added subject-matter.

A further addition of undisclosed subject-matter was represented by the deletion of iron from the list of the dispersoid-forming elements. The examples of the application all comprised iron, which could contribute

to the formation of dispersoids even when present in small amounts. Unlike the original application, present claim 1 did not limit the total amount of iron and the other dispersoid forming elements. Iron had changed its role from dispersoid-forming to an impurity. As an impurity, it could be present in substantial amounts, as shown by D17 and D22. Thus, the total amount of iron and the other dispersoid-forming elements could now exceed 1.0%. This corresponded to compositions which were not disclosed as inventive in the application as originally filed.

Finally, the application as filed likewise did not disclose that the composition was closed and comprised Ag and optionally Zn, as stipulated by present claim 1.

Reasons for the Decision

1. The application as originally filed relates to an Al alloy comprising Mg, Cu and Li (paragraph [0001], claim 1). According to claim 1 as originally filed Cu and Mg are present in a total amount below a solubility limit of the alloy. By contrast, present claim 1 does not impose any limitation in respect of the solubility limit on the content of Mg and Cu.

As shown by Figure 1, the condition on the solubility limit is not an inherent result of the Cu and Mg ranges stipulated by present claim 1 (and table 1), but represents a further restriction on the Cu and Mg content.

Moreover, the application as originally filed does not disclose that this feature is merely a preferred condition which may be omitted. On the contrary, it is consistently presented as essential (paragraphs [0033]-[0035]).

Therefore the omission in claim 1 of the feature relating to the solubility limit extends the subject-matter beyond what was disclosed in the application as originally filed.

2. According to present claim 1 the alloy comprises at least one dispersoid-forming element selected from chromium, vanadium, titanium, zirconium, manganese, hafnium, scandium and rare earth elements in a total amount up to 1.0%. No explicit limit is given for iron, which may be present under the "impurities". Indeed, iron is the most common impurity found in Al (P1, page 230) and its content may be non-negligeable. In the alloy of D17, for instance, contents of Fe up to 0.30% are regarded as impurities (page 5, first paragraph). In D22 different limits for Fe as an impurity are given for the different alloy designations, reaching even values such as 0.50% (alloy 2024) or 1.0% (alloy 2025). Hence, alloys with a total content of chromium, vanadium, titanium, zirconium, manganese, hafnium, scandium, rare earth elements and iron in excess of 1.0% are now contemplated.

However, the application as originally filed discloses a total content of up to 1.0% for at least one dispersoid-forming element selected from chromium, vanadium, titanium, zirconium, manganese, nickel, iron, hafnium, scandium and rare earth elements. The application, does not disclose a minimum amount below which these elements, in particular Fe, would not be

considered "dispersoid-forming elements". Indeed the the wording of the claim refers to the "total amount" of these elements, without specifying in which form they are provided: dispersoids, solid- solution or a combination of the two. Therefore, in the application as originally filed the upper limit of 1.0% refers to the total content of chromium, vanadium, titanium, zirconium, manganese, hafnium, scandium, rare earth elements and iron, and thus excludes the presently contemplated alloys whose content of these elements is beyond this limit.

Thus, a total of 1.0% of at least one dispersoid-forming element selected from chromium, vanadium, titanium, zirconium, manganese, hafnium, scandium and rare earth elements was not disclosed in the application as originally filed. Also because of this, the patent comprises subject-matter which extends beyond the content of the application as originally filed (Article 100(c) EPC).

3. For the reasons under points 1 and 2 alone the patent cannot be maintained as granted. Hence, there is no need to consider the other objections which have been raised.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Moser

I. Beckedorf

Decision electronically authenticated