

**Internal distribution code:**

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

**Datasheet for the decision  
of 16 March 2023**

**Case Number:** T 0914/21 - 3.3.05

**Application Number:** 15826433.3

**Publication Number:** 3176273

**IPC:** C22C21/00, B23K1/00, B23K1/19,  
B23K31/02, B23K35/14,  
B23K35/22, B23K35/28,  
B23K103/10, B32B15/01,  
F28F21/08, B23K1/008,  
B23K35/02, C22C21/02, C22C21/06

**Language of the proceedings:** EN

**Title of invention:**  
ALUMINIUM ALLOY BRAZING SHEET

**Patent Proprietor:**  
UACJ Corporation

**Opponents:**  
C-TEC CONSTELLIUM TECHNOLOGY CENTER /  
CONSTELLIUM NEUF-BRISACH  
Speira GmbH

**Headword:**  
Brazing sheet/UACJ

**Relevant legal provisions:**

EPC Art. 123(2)

**Keyword:**

Amendments - allowable (no)

**Decisions cited:**

**Catchword:**



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

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 0914/21 - 3.3.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.05**  
**of 16 March 2023**

**Appellant:** Speira GmbH  
(Opponent 2) Aluminiumstrasse 1  
41515 Grevenbroich (DE)

**Representative:** Cohausz & Florack  
Patent- & Rechtsanwälte  
Partnerschaftsgesellschaft mbB  
Bleichstraße 14  
40211 Düsseldorf (DE)

**Respondent:** UACJ Corporation  
(Patent Proprietor) 1-7-2, Otemachi  
Chiyoda-ku  
Tokyo 100-0004 (JP)

**Representative:** Kramer Barske Schmidtchen  
Patentanwälte PartG mbB  
European Patent Attorneys  
Landsberger Strasse 300  
80687 München (DE)

**Party as of right:** C-TEC CONSTELLIUM TECHNOLOGY CENTER /  
(Opponent 1) CONSTELLIUM NEUF-BRISACH  
Boite Postale CS10027/ZIP RHENANE NORD  
Propriété Industrielle  
725, Rue Arstide Berges / RD 52  
38341 Voreppe / 68600 Biesheim (FR)

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

**Decision under appeal:**            **Decision of the Opposition Division of the  
European Patent Office posted on 12 April 2021  
rejecting the opposition filed against European  
patent No. 3176273 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chair**                            E. Bendl  
**Members:**                        T. Burkhardt  
                                      R. Winkelhofer

## Summary of Facts and Submissions

I. Opponent 2's (the appellant's) appeal is against the opposition division's decision to reject the oppositions against European patent No. 3 176 273 B.

II. The following documents were among those discussed at the opposition stage:

D8 US 2015/165564 A1

D8WO WO 2013/180630 A1

III. Independent claim 1 of the main request reads as follows (differences with respect to claim 2 as originally filed - according to a new version of the translation, which was submitted on 11 November 2020 - are underlined or struck through, emphasis being added by the board):

"1. An aluminum-alloy brazing sheet for brazing in an inert-gas atmosphere without using a flux, consisting of having a core and a filler material clad to one side or both sides of the core, wherein

the core has a chemical composition consisting of that consists of Mg: 0.35-0.8% (mass%; likewise hereinbelow), at least one from among Cu: 0.05-0.8% and Mn: 0.01-1.8%, and at least one from among Si: 0.1-1.3%, Fe: 0.3-1.0%, Cr: 0.01-0.35%, Zn: 0.4% or less, and Ti: 0.01-0.1%, the remainder being composed of Al and unavoidable impurities; and

the filler material has a chemical composition consisting of that consists of Si: 6-13% and Bi: 0.001-0.05% and being is restricted to Mg: less than 0.05%, Be: less than 0.001 %, Ca: less than 0.01%, Li: less than 0.004%, Na: less than 0.001%, Y: less than 0.01%, La: less than 0.01 %, and Ce: less than 0.01%, optionally further containing Zn: 0.1-5.0%, the remainder being composed of Al and unavoidable impurities."

- IV. The first clause, i.e. "[a]n aluminum-alloy brazing sheet for brazing in an inert-gas atmosphere without using a flux, consisting of a core and a filler material clad to one side or both sides of the core, wherein ...", also appears in claim 1 of auxiliary requests I and II.
- V. The opposition division held *inter alia* that the main request met the requirements of Article 123(2) EPC.
- VI. The appellant's arguments at the appeal stage are reflected in the reasons below.
- VII. The respondent's (patent proprietor's) arguments at the appeal stage relevant to the present decision can be summarised as follows.

The replacement of "having a core and a filler material" by "consisting of a core and a filler material" in claim 1 of all the requests met the requirements of Article 123(2) EPC.

The combination of claim 2 with paragraph [0007] as originally filed justified this replacement, in particular since the remaining original disclosure also did not mention or imply an additional layer.

The mechanism explained in paragraph [0032] of the application as originally filed excluded an intermediate layer. This was confirmed by paragraphs [0033] and [0034] of the application as originally filed.

A sacrificial layer or an additional layer on the core material's second side, in the event that the filler material was only clad to the core material's first side, had nothing to do with the invention.

- VIII. Joint opponents 1 have not made substantive submissions in the appeal proceedings and are party as of right.
- IX. Oral proceedings took place in the absence of joint opponents 1 on 16 March 2023.
- X. On substance, the appellant requests that the decision under appeal be set aside and the patent be revoked.

The respondent requests that the appeal be dismissed (main request) or the patent be maintained on the basis of one of two auxiliary requests submitted with the reply to the appeal.

## **Reasons for the Decision**

- 1. Consideration of new arguments

In response to the board's communication under Rule 15(1) RPBA 2020, the respondent submitted a number

of new arguments. The appellant requested that they not be considered.

However, since all the claim requests fail anyway, the question of their consideration can be left unanswered.

*Main request*

The main request corresponds to the patent as granted.

2. Article 123(2) EPC

2.1 To a great extent, claim 1 of the main request is based on claims 2 to 5 as originally filed.

However, as compared with claim 2 as originally filed, claim 1 of the main request relates to "[a]n aluminum-alloy brazing sheet ... consisting of ~~having~~ a core and a filler material clad to one side or both sides of the core".

For the reasons set out below, this amendment is not directly and unambiguously derivable from the application as originally filed, contrary to the opposition division's view.

2.2 It has not been disputed that the wording "consisting of" is not explicitly present in the application as originally filed in the context of the constituent parts of the brazing sheet. Indeed, both the initial and the corrected versions of the translation of the application as originally filed (in Japanese) merely disclose the brazing sheet as "having" a core and a filler material clad to one side or both sides of the core (claim 2, see also paragraphs [0018] and [0019]).



This means that further layers/elements are not excluded.

2.3 In the respondent's view, the combination of claim 2 with paragraph [0007] as originally filed justified the replacement of "having" by "consisting of", in particular since the remaining original disclosure also does not mention or imply an additional layer.

However, this is not convincing.

Firstly, the disclosure of paragraph [0007] relates to two prior-art documents and does not indicate that the inventive brazing sheet must not comprise additional layers or elements, i.e. besides the core and the filler material (the latter being on one or on both sides of the core).

Even if it were considered, for the sake of argument, that paragraph [0007] also had consequences for the invention, this passage only indicates that a quite specific additional layer has drawbacks, namely "a thin film" on the filler-material surface that is "composed of a metal having a melting point higher than that of the filler material". This paragraph does not in any way exclude, for example:

- a layer between the core and the filler material (such as the "interlayer" of claim 1 of **D8/D8WO**)
- a layer on the opposite side of the core in the case of a filler material that is present only on one side of the core, e.g. a sacrificial (anode) layer
- a layer on the same side as the filler material but different from the specific layer disclosed in paragraph [0007].

2.4 For the sake of completeness, neither the exemplary embodiments nor Figure 1 of the application as originally filed hint at the new feature.

- Embodiments 61 and 62 (Table 3 on page 26) are the only embodiments that fulfil the requirement of claim 1 that the core contain "at least one of Si, Fe, Cr, Zn or Ti". While it is true that these embodiments do not mention further layers besides a core and a filler material, further features are disclosed in combination. For example, the filler material is clad to only one side of the core (see paragraph [0076] and the last lines of paragraph [0054]). Moreover, *all of* Si, Fe, Cr, Zn and Ti are present in the core of these embodiments.

- Similarly, Figure 1 discloses a core and a filler material on only one side. Moreover, Figure 1 refers to the specific compositions of the core and the filler material of the examples.

However, claim 1 has not been limited accordingly and, should the specific embodiments or the figure be considered as basis, the amendments would be an intermediate generalisation.

2.5 In addition, the respondent is of the opinion that the mechanism explained in paragraph [0032] of the application as originally filed excluded an intermediate layer, as confirmed by paragraphs [0033] and [0034] of the application as originally filed, stating that the core was clad with a filler material.

However, this argument is not convincing. According to paragraph [0032], Mg is initially present in a limited

amount in the core. During heating, it diffuses from the core to the filler.

This mechanism does not exclude intermediate layers *per se*. Depending on the composition, numerous types of intermediate layers are imaginable that allow for Mg diffusion, depending on the composition, the structure and the thickness of the intermediate layer.

Paragraphs [0033] and [0034] can also not be relied on, in particular since paragraph [0034] discloses a closed core composition ("core having a chemical composition that *consists of ...*"; emphasis added by the board) that does not comprise Mn or Cu, contrary to claim 1 of the main request. Hence, this paragraph is not directed to the invention of claim 1 in a direct and unambiguous manner.

Similarly, the fact that the core is clad with the filler (paragraph [0034]) does not necessarily mean that the core is *directly* clad, i.e. without an intermediate layer.

- 2.6 The respondent further argues that the application as originally filed did not disclose further layers. A sacrificial layer, for example, had nothing to do with the invention, which was about the role of Mg diffusion. The same held for an additional layer on the second side (if the filler material was only clad to the first side of the core material).

However, in the present case, the mere fact that further layers (such as an intermediate layer like that of D8/D8WO) are not explicitly disclosed in the application as originally filed does not mean that the

absence of further layers is directly and unambiguously disclosed.

The presence of such additional layers is also not hypothetical, contrary to the respondent's opinion.

Thus,

- D8/D8WO discloses an "interlayer" between the core and the filler material (claim 1), and
- it has not been disputed that the application of a sacrificial (anode) layer is frequent in this field. Even if it were acknowledged that the skilled person would not contemplate such a layer on the side with the filler material (since it would have to be removed prior to brazing), they could well contemplate such a layer on the second side of the core.

- 2.7 In the present case, the replacement of "having" by "consisting of" therefore creates a criticality as to the presence of only the core and the filler material clad to one or both sides of the core which is not present as a sub-combination in the application as originally filed.

Consequently, the main request does not fulfil the requirements of Article 123(2) EPC.

#### *Auxiliary requests*

### 3. Article 123(2) EPC

Since claim 1 of auxiliary requests I and II also requires that the brazing sheet consists of a core and a filler material clad to one or both sides of the core, these requests fail for the same reason as the main request (Article 123(2) EPC).

## Order

### For these reasons it is decided that:

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

The Registrar:

The Chair:



C. Vodz

E. Bendl

Decision electronically authenticated