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**Datasheet for the decision
of 25 September 2012**

Case Number: T 1563/10 - 3.2.08
Application Number: 03794057.4
Publication Number: 1538229
IPC: C22C 9/04, C22F 1/08
Language of the proceedings: EN

Title of invention:
High-strenght copper alloy

Patentee:
Mitsubishi Shindoh Co., Ltd.

Headword:
-

Relevant legal provisions:
EPC Art. 84
EPC R. 43(2), 115(2)
RPBA Art. 15(3)

Keyword:
"Clarity (no) - all requests"
"Allowability of more than one independent claim of the same
category (no) - main and second auxiliary requests"

Decisions cited:
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Catchword:
-



Case Number: T 1563/10 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 25 September 2012

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 24 February 2010
refusing European patent application
No. 03794057.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: T. Kriner
Members: R. Ries
A. Pignatelli

Summary of Facts and Submissions

- I. The appellant (applicant) lodged an appeal against the decision of the examining division dated 24 February 2010 refusing European patent application No. 03794057.4.

The appeal was received at the European Patent Office on 24 March 2010 and the appeal fee was paid on 25 March 2012. The statement setting out the grounds of appeal was received on 15 June 2010.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of

- claims 1 to 14 of the main request or,
 - claims 1 to 8 of the first auxiliary request,
- both requests submitted on 15 June 2010;

or, alternatively, on the basis of

- claims 1 to 14 of the second auxiliary request or
 - claims 1 to 8 of the third auxiliary request,
- both requests submitted on 23 June 2010.

- II. In an official communication of 24 April 2012 annexed to the summons to oral proceedings, the Board gave its provisional view on the case. The claims of all requests were considered to lack clarity (Article 84 EPC), and the independent claims of the same category according to the main and second auxiliary requests were objected to under Rule 43(2) EPC.

- III. In its letters dated 9 July 2012 and 21 September 2012, the appellant informed the Board that it did not plan to attend the oral proceedings scheduled for

25 September 2012. No substantive comments on the Board's communication were submitted.

IV. Oral proceedings were held on 25 September 2012 in the absence of the appellant. In accordance with Rule 115(2) EPC and Article 15(3) RPBA, the proceedings were continued without the party.

V. Independent claims 1 and 9 of the main request read as follows:

"1. A high strength copper alloy characterized in that said copper alloy comprises 4 to 19 mass percent of Zn, 0.5 to 2.5 mass percent of Si and the remaining mass percent of Cu, wherein said mass percent of Zn and said mass percent of Si satisfy the relationship $Zn - 2.5 \cdot Si = 0$ to 15 mass percent; average grain size D of the microstructure of said copper alloy distributes in $0.3 \mu m \leq D \leq 3.5 \mu m$; and 0.2 yield strength in recrystallization state of said copper alloy is higher than 250 N/mm^2 ."

"9. A high strength copper alloy characterized in that said copper alloy comprises 66 to 76 mass percent of Cu, 21 to 33 mass percent of Zn and 0.5 to 2 mass percent of Si, wherein said mass percent of Cu, said mass percent of Zn and said mass percent of Si satisfy the relationship $Cu - 5 \cdot Si = 62$ to 67 mass percent and $Zn + 6 \cdot Si = 32$ to 38 mass percent; average grain size D of the microstructure of said copper alloy distributes in $0.3 \mu m \leq D \leq 3.5 \mu m$; and 0.2% yield strength in recrystallization state of said copper alloy is higher than 250 N/mm^2 ."

Dependent claims 2 to 8 and 10 to 14 are concerned with preferred embodiments of the copper alloys set out in independent claims 1 and 9, respectively.

In independent claims 1 and 9 of the second auxiliary request, the wording "said copper alloy comprises ... the remaining mass percent Cu, wherein..." was replaced by "said copper alloy **contains...**the remaining mass percent of Cu, **and inevitable elements**, wherein... " (amendment in bold, added by the Board).

The claims of the first and third auxiliary requests were restricted to claims 1 to 8 according to the main and second auxiliary requests, respectively.

VI. The appellant's arguments submitted in the written proceedings are summarized as follows:

In the claims of the main and first auxiliary requests, the term alloy "consisting essentially" was replaced by "comprises" since the alloy could comprise additional components as disclosed on page 21, last paragraph of the application as filed (A1 publication, paragraph [0053]).

The wording of the claims of the second and third auxiliary requests was amended so that the "alloy contains %X, %Y ...and inevitable elements" to make it clear that other elements had to be added to the copper alloy to further improve its properties.

Independent claims 1 and 9 of the main and second auxiliary requests defined different alloy compositions and thus related to alternative embodiments of the

invention, but in both cases to Cu alloys having a high strength, which was an important technical feature of the claimed alloy.

The amended claims of the main and first to third auxiliary requests therefore satisfied the requirements of Articles 84 and Rule 43(2) EPC.

Reasons for the Decision

1. The appeal is admissible.
2. Clarity, Article 84 EPC; all requests
 - 2.1 The Cu-base alloy set out in claim 1 of the main and first auxiliary requests comprises 4 to 19 wt% Zn, 0.5 to 2.5 wt% Si and the balance being Cu (= the remaining mass). According to EPO practice, such wording in alloy claims defines a "closed composition" which, except for unavoidable impurities, excludes the presence of further elements. However, as set out in dependent claims 2 to 8 of the main and first auxiliary requests, the claimed alloy includes further alloying elements such as Co, Sn, Fe and/or Ni within specific amounts. It remains unclear at the expense of which component the additional element(s) mentioned in the dependent claims and also on page 21, last paragraph, of the application as filed should be added. In that respect, the claims are self-contradictory and therefore fail to meet the requirement of clarity.
 - 2.2 The wording "alloy containing ...X, Y...Z and the remaining mass being Cu and inevitable elements"

featuring in the second and third auxiliary requests defines an "open composition". The term "containing" allows not only for the presence of the components referred to in the dependent claims, but also for the addition of further unknown constituents in undetermined amounts. Consequently, such an "open composition" does not meet the requirement of clarity either.

2.3 Objection therefore arises under Article 84 EPC to the claims of all requests.

3. Rule 43(2) EPC; main and second auxiliary requests

Independent claims 1 and 9 of the main and second auxiliary requests are concerned with two high-strength copper alloys having different alloy chemistries.

Rule 43(2) provides that a European patent application should not contain more than one independent claim in the same category, unless they involve

- (i) a plurality of interrelated products,
- (ii) different uses of a product or apparatus, or
- (iii) alternative solutions to a particular problem,

where it is inappropriate to cover these alternatives in a single claim.

In the present case, condition (a) does not apply to the two product claims (claims 1 and 9 of the main request and the second auxiliary request) because the Cu-base alloys are not interrelated products which are meant to be different objects that complement each other, or somehow work together.

Condition (b) does not apply either because the claims are not directed to the use of a product or an apparatus.

Condition (c) allows claims that are "alternative solutions to a particular problem". The difference in alloy chemistry inevitably results in different physical and mechanical properties which qualify the alloys for different purposes. As confirmed in the application (A1 publication, paragraphs [0012] and [0014]), the Cu alloy set out in claim 1 of the main request (in the application called "the first invention copper alloy") comprises 4 to 19 wt% Zn and is suitable for producing rolled stocks (plates, rods, wires, etc.). Contrary thereto, the composition of the Cu alloy set out in independent claim 9 (the "third invention copper alloy") comprises 21 to 33 wt% Zn and is said to be designed for drawing wires. Consequently, and contrary to the appellant's position, the high strength Cu alloys referred to in independent claims 1 and 9 are not designed to solve the same "particular" technical problem.

Consequently, the claims of the main and second auxiliary requests do not satisfy the requirements of Rule 43(2) EPC.

4. In the official communication annexed to the summons to oral proceedings, the Board informed the appellant of the above-mentioned deficiencies in the claims of all requests. Moreover, it was indicated how the deficiencies might possibly be overcome. However, the appellant did not provide any comments, arguments or requests in response to the Board's communication.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

V. Commare

T. Kriner