Case Number: T 1639/10 - 3.2.08
Application Number: 99202744.1
Publication Number: 985737
IPC:  C22F 1/04, C22F 1/053, B05D 7/14, B05D 3/02, C09J 4/00, B64C 1/00

Language of the proceedings: EN

Title of invention: Method for coating faying surfaces of aluminium-alloy components and faying surfaces coated thereby

Patent Proprietor: McDONNELL DOUGLAS CORPORATION

Opponents: AIRBUS SAS/AIRBUS OPERATIONS/AIRBUS OPERATIONS Ltd AIRBUS OPERATIONS GmbH/AIRBUS OPERATIONS S.L.

Headword: -

Relevant legal provisions (EPC 1973): EPC Art. 100(c)

Keyword: "Added subject-matter (no)"

Decisions cited: -

Catchword: -
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DECISION
of the Technical Board of Appeal 3.2.08
of 15 March 2012

Appellant: MCDONNELL DOUGLAS CORPORATION
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 25 May 2010
revoking European patent No. 985737 pursuant to
Article 101(3)(b) EPC.

Composition of the Board:
Chairman: T. Kriner
Members: M. Alvazzi Delfrate
U. Tronser
Summary of Facts and Submissions

I. By decision posted on 25 May 2010 the opposition division revoked European Patent No. 985 737, which had been opposed on the grounds of Articles 100(a) and 100(c) EPC 1973, on the basis of the latter ground of opposition.

II. The appellant (patent proprietor) lodged an appeal against this decision on 30 July 2010 and paid the appeal fee on the same day. The statement setting out the grounds for appeal was filed on 21 September 2010.

III. The appellant requested that the decision under appeal be set aside and that the case be remitted to the opposition division for consideration of novelty and inventive step on the basis of the claims as granted (main request) or on the basis of one of auxiliary requests 1 or 2 submitted with letter dated 21 September 2010, or on the basis of one of auxiliary requests 3 to 6 submitted with letter dated 15 January 2012.

IV. The respondents (opponents) requested that the appeal be dismissed.

V. Claim 1 as granted (main request) reads as follows:

"A method for preparing an aluminum-alloy, aircraft component comprising the steps of:
- providing an aluminum-alloy component precursor having surfaces to be fayed, said precursor curable to a final state, said alloy being selected from the group"
consisting of 2000, 4000, 6000 and 7000 series aluminum alloys;

- providing an encapsulated curable organic coating material at about room temperature, said organic coating material selected from the group consisting of phenolics, epoxies, silicones, novolaks, acrylates, polyvinyl chlorides, polyimides, melamines, polyurethanes and polyureas;

- coating the surfaces to be fayed of the component precursor with the organic coating material to a thickness of from about 0,013 to about 0,025 cm (0,005 to about 0,010 inch); and

- treating the coated aluminum-alloy component precursor to both treat the aluminum to the final state and cure the organic coating."

The auxiliary requests are not relevant for the present decision.

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

Claim 1 did not specify the time at which the coating material was provided before the coating step. Hence, it merely required that the material was rendered available at room temperature, without implying that it was also applied at said temperature. For the person skilled in the art, the feature of the material being rendered available at room temperature, albeit not expressly stated in the originally filed documents, was
implied by the fact that no other temperature was specified for the provision of the coating material.

Claim 2 as originally filed did not refer to a second coating and disclosed that the coating material could be encapsulated. This was a generally preferred feature of the claimed invention. There was no reason why this preferred feature should not be applied to the specific materials according to present claim 1, which were disclosed as preferred coating materials in originally filed claims 13 and 14 and on page 12, lines 25-28. Moreover, the provision of said materials in encapsulated form was expressly disclosed in the case of claim 13 and by the fact that claim 14 could depend on claim 2.

Originally filed claim 16 disclosed the application of a coating with a thickness according to present claim 1. The wording "first coating" was used in claim 16 not to necessarily require the presence of a second coating, which was merely an optional feature of the claimed invention, but uniquely to allow the claim to depend on claim 10 too, which recited the application of said second coating.

For these reasons the subject-matter of the patent did not extend beyond the content of the application as originally filed.

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

Claim 1 comprised the feature according to which the curable organic coating material was provided at about
room temperature. This step had to be executed between the step of providing the alloy component precursor and that of coating said component precursor with the organic coating material. In the embodiment described on page 8, lines 18-20, it was carried out immediately, for instance before the coating step. Since the step of curing the applied coating material could be carried out at an elevated temperature, it was therefore possible that the coating material was provided at an already elevated temperature. Anyhow the application as originally filed did not clearly and unambiguously disclose at what temperature the curable organic material was to be provided, let alone at about room temperature.

Moreover, the application as filed did not disclose that the curable organic coating material was an encapsulated material selected from the group of materials listed in claim 1. First of all, the description disclosed the use of an encapsulated material exclusively for methods comprising the application of two layers of coating, while present claim 1 did not specify the number of coatings. Moreover, although originally filed claim 14 disclosed the use of silicones, acrylates, polyvinyl chlorides and polyimides as coating materials, it did not mention that they were encapsulated. The passages of the description on page 12, lines 7-9, and page 12, lines 25-27, mentioned said materials too. However, these passages did not disclose either that they were encapsulated. Additionally, the latter passage disclosed their use only to improve corrosion-resistance. Thus they were to be used only in methods aiming at this purpose. As to novolaks and polyureas,
they were not even mentioned in the claims but only in specific embodiments of the description.

Furthermore, the range of from about 0.005 to about 0.010 inch was disclosed in the application as filed exclusively as the thickness of a first layer for a material with two layers of coating. This was not only in the passages on page 12, lines 16-20 and page 21, lines 26-27 of the description, but also in claim 16. Said claim, which referred to the further application of a first coating, clearly implied the presence of a second coating. Additionally, the range of 0.005 to about 0.010 inch was always disclosed as the thickness of the coating after curing. By contrast, present claim 1 did not recite a second coating and defined said range with respect to the thickness of the coating before curing.

In view of all these reasons, the subject-matter of the patent extended beyond the content of the application as filed.

**Reasons for the Decision**

1. The appeal is admissible.

2. Article 100(c) EPC 1973

2.1 The following features were not present in originally filed claim 1 and were introduced into the claim during the course of the examination proceedings:
(a) the curable organic coating material is provided at
about room temperature;

(b) said organic coating material is encapsulated and
selected from the group consisting of phenolics,
epoxies, silicones, novolaks, acrylates, polyvinyl
chlorides, polyimides, melamines, polyurethanes and
polyureas; and

(c) the surfaces to be fayed of the component precursor
are coated with the organic coating material to a
thickness of from about 0,013 to about 0,025 cm (0,005
to about 0,010 inch).

2.2 The relevant question to be decided in assessing
whether an amendment adds subject-matter extending
beyond the content of the application as filed is
whether said amendment is directly and unambiguously
derivable from the application as filed. The content of
the application as filed to be considered for this
purpose comprises not only its literal but also its
implicit disclosure - i.e. what any person skilled in
the art would consider necessarily implied by its
disclosure (see Case Law of the Boards of Appeal of the

2.3 Present claim 1 is silent on the temperature of
application of the coating. Nor does it define the
point in time at which the coating material is provided.
Hence it may be any point in time before the coating
step, and claim 1, by stating that the curable organic
coating material is provided at about room temperature,
merely defines that said coating material is rendered
available at about room temperature at an undefined point in time before the step of coating.

The application as originally filed does not explicitly disclose at what temperature the curable organic coating material is made available. In the absence of this indication and lacking any indication to the contrary, the person skilled in the art would understand that the coating material is made available at room temperature. In the present case, wherein the coating material can be kept at room temperature without curing, there is no reason for providing it at a temperature other than room temperature. Hence, feature (a) is implicitly disclosed in the application as originally filed.

2.4 Claim 2 as originally filed discloses that the coating material is encapsulated without specifying the number of coatings to be applied to the component precursor. Therefore, the feature according to which the curable organic material is encapsulated is disclosed for an unspecified number of coatings and not exclusively, as argued by the respondent, for methods comprising the application of two layers of coating.

The encapsulation of the coating materials is a preferred feature of the claimed invention (see for instance page 8, lines 7-8 and lines 15-17 or page 9, lines 2-3), and its application is not limited to a specific coating material. Accordingly, it is clear that it can be applied to all the preferred coating materials disclosed in the application. Preferred coating materials are disclosed for instance in originally filed claim 13 and on page 12, lines 25-28.
Claim 13 discloses the use of an encapsulated coating material from the group consisting of phenolics, urethanes, epoxies and melamines. The passage on page 12, lines 25-28 discloses coating materials to be used to improve corrosion resistance, which is the general purpose of the claimed process (see page 3, lines 21-24). According to this passage silicones, novolaks, polyvinylchlorides, polyimides, polyurethanes and polyureas can also be used as coating materials. It is true that said passage does not mention that these materials are encapsulated. However, as explained above, this feature is a preferred one applicable to all the coating materials contemplated by the invention. This is in agreement with the fact that claim 14 recites the use as a curable coating material selected from the group consisting of polyurethanes, polyvinyl chlorides, silicones, epoxides, acrylates, polyimides and phenolics and depends inter alia on claim 2, which states that the coating material can be encapsulated. It is thus clear from the application as filed that any one of the materials listed in present claim 1 can be used as an encapsulated curable organic material. Accordingly, feature (b) is also disclosed in the application as originally filed.

2.5 Originally filed claim 16 discloses that a coating can be "deposited to a thickness" of from about 0.005 to about 0.010 inch. Accordingly, it is clear that said range relates to the coating as deposited, i.e. before curing. It is true that claim 16 refers to a "first" coating. However, claim 16 is a dependent claim, which can depend not only on claim 10, comprising the step of applying a second coating, but also on claim 1, which does not mention such a second coating. Hence, it is
clear that the term "first" is used only to allow these different dependencies and not to require the presence of a second coating. This is consistent with the fact that the application discloses applying a second coating as optional (see for instance Figure 2). Therefore, feature (c) is also disclosed in the application as originally filed.

2.6 In view of the above, the board finds that the subject-matter of the patent in suit does not extend beyond the content of the application as filed. Accordingly, (the ground underlying the appealed decision cannot justify the revocation of the patent.

3. Since no decision was taken by the opposition division on the issues of novelty and inventive step, the board finds it appropriate to remit the case to the department of first instance for further prosecution, as requested by the appellant.
Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution.

The Registrar: The Chairman:

V. Commare T. Kriner