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Datasheet for the decision of 24 November 2009

Case Number: T 0576/07 - 3.2.08

Application Number: 96915379.0

Publication Number: 0828863

IPC: C22F 1/04

Language of the proceedings: EN

Title of invention:
Preparation of pre-coated aluminum alloy articles

Patentee:
McDonnell Douglas Corporation

Opponent:
Airbus SAS

Headword:
-

Relevant legal provisions:
EPC Art. 56
EPC R. 103(1)(a)

Relevant legal provisions (EPC 1973):
EPC R. 68(2)

Keyword:
"Inventive step (no) - main request"
"Inventive step (yes) - auxiliary request"
"Admissibility of late filed request (yes)"
"Reimbursement of appeal fee (no)"
"Reasoned decision (yes)"

Decisions cited:
-

Catchword:

-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0576/07 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 24 November 2009

Appellant I: (Patent Proprietor)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 2 February 2007 concerning maintenance of European patent No. 0828863 in amended form.**

Composition of the Board:

Chairman: T. Kriner
Members: M. Alvazzi Delfrate
U. Tronser

Summary of Facts and Submissions

I. In its interlocutory decision, posted on 2 February 2007, the opposition division held that the European patent 828863 in amended form according to the first auxiliary request then on file satisfied the requirements of the European Patent Convention.

II. Both the patent proprietor (appellant I) and the opponent (appellant II) lodged an appeal against this interlocutory decision on 30 March 2007.The appeal fees were paid on the same day and the statements setting out the grounds for appeal were filed on 11 June 2007 by appellant I and on 4 June 2007 by appellant II.

III. Oral proceedings before the Board were held on 24 November 2009, at the end of which the following requests were made:

Appellant I requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or the auxiliary request, both filed during the oral proceedings.

Appellant II requested that the decision under appeal be set aside and that the patent be revoked. Additionally it requested the reimbursement of the appeal fee.

IV. Claim 1 of the main request underlying the present decision reads as follows:

"A method for preparing an aluminium-alloy fastener article, comprising the steps of:

providing an aluminium-alloy fastener article that is in an untreated state;
providing a curable organic coating material curable at about a heat-treatment temperature of the aluminium-alloy fastener article;
applying the organic coating material to the aluminium-alloy fastener article which is not in its final heat-treated state; and
heat-treating the coated aluminium fastener article to its final heat-treated state, thereby simultaneously curing the organic coating."

Claim 1 of the auxiliary request departs from claim 1 of the main request in that the expression "fastener article" is replaced by the term "rivet" and the coating material is defined as a material comprising a phenolic resin.

V. The following documents are relevant for the present decision:

D1: US-A-3 899 370;
D2: US-A-3 841 896;
D3: GB-A-1 322 381;
E1: Brochure "To Effectively Stop Structural Exfoliation ... Hi-Kote 1 a Protective Coating for Titanium Alloy and Corrosion Resistant Steel Fasteners", 1992, Hi-Shear Corporation, USA;
E2: "Hi-Kote a Protective coating for Titanium alloy and Corrosion Resistant Steel Fasteners", Engineering Report 4-01 020, issued on 25 May 1972, Hi-Shear Corporation; and

E3: Hi Shear Process Specification Hi-Kote 1, issued on 2 July 1996 and Material Safety Data Sheet, prepared on 17 February 1993

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

Main request

D1 disclosed a method for the production of extrusion moulded materials. Due to the high deformation rates involved by their production process, these materials exhibited a high hardness, which rendered them unsuitable for the production of fastener articles. Therefore, the claimed invention was not obvious when starting from the method disclosed in D1.

D2 taught to apply a coating material to fasteners which was cured at a temperature different from the heat treating temperature of the fastener material. Therefore, the claimed subject-matter was also not obvious when starting from the method according to D2.

Auxiliary request

The auxiliary request had been filed as a reaction to the findings of the board in respect of the main request and the auxiliary request 1 to 8 discussed at the oral proceedings. Since it related to features which were already present in the claims of these requests and since the amendments to claim 1 of the main request were easy to understand, there was no reason not to admit the new auxiliary request into the proceedings.

The auxiliary request clarified that the fastener article was a rivet. Since a rivet required to be deformed during its installation, it could definitively not be produced with the materials having high hardness obtained by the method described in D1.

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

Main request

D1 disclosed a method which, albeit not specifically directed to the production of a fastener article, exhibited all the remaining features of the method according to claim 1. In particular, D1 taught that the heat treatment of an aluminium alloy article and the curing of a coating provided on this article could be combined to improve the efficiency of the production of such an article. Since D1 additionally referred to aircraft articles, which included fasteners, it was obvious to apply the method disclosed in D1 also for producing a fastener article.

Moreover, the method of claim 1 was distinguished from the method disclosed in D2 solely by the performance of the curing step and the heat treating step at the same time. However, this measure was already suggested by D1. Therefore, the subject-matter of claim 1 was also obvious when starting from the method described in D2.

Auxiliary request

The auxiliary request should not be admitted into the proceedings since it was late filed and, changing the focus of the claimed invention, took appellant II by surprise.

Furthermore, a rivet was a standard type of fastener whose choice was a matter of routine, and the use of phenolic resin for a curable coating was well known. Therefore, the method of claim 1 was also obvious when starting from the method according to D1.

Additionally, D2 disclosed the application of a coating to rivets, and the use of phenolic resins for coatings was known for instance from D3 or from the coating Hi-Kote 1 ® described in documents E1-E3. Therefore, the subject-matter of claim 1 was also obvious when starting from the process described in D2.

Refund of the appeal fee

The appealed decision was not reasoned in respect of novelty in view of D1, since it merely stated that no single prior art disclosed the features of the claimed invention. The refund of the appeal fee was equitable, since the lack of reasoning constituted a substantial procedural violation.

Reasons for the Decision

1. The appeals are admissible.

2. *Main request*

D1 discloses (see in particular claim 1) a method for preparing an aluminium-alloy article (see column 1, line 5-11) comprising the steps of: providing an aluminium-alloy article that is in an untreated state; providing an organic coating material curable at about a heat-treatment temperature of the aluminium-alloy article; applying the organic coating material to the aluminium-alloy article which is not in its final heat-treated state (see claim 1, step c); and heat-treating the coated aluminium article to its final heat-treated state, thereby simultaneously curing the organic coating (see claim 1, step d).

Starting from the method shown in D1 the question arises whether or not it was obvious to use this method for preparing a fastener article.

D1 explicitly refers to aluminium alloy articles produced by a method involving extrusion moulding. Since claim 1 does not specify either a type of fastener, or its use or properties, said fastener article could be unprobematically produced by a method involving extrusion moulding. Therefore, the application of the method according to D1 for the production of fastener articles is obvious, and the subject-matter of claim 1 does not involve an inventive step.

3. Auxiliary request

3.1 Admissibility

The auxiliary request has been filed at the oral proceedings as a reaction to the findings of the board that the subject-matter of claim 1 of the main request and of all the auxiliary requests then on file were not patentable. Since the features added to claim 1 were already present in the granted claims 6 and 21, appellant II cannot be surprised by their introduction into claim 1. For this reason, and since the amendments did not raise complex issues the auxiliary request has been admitted into the proceedings.

3.2 Inventive step

3.2.1 Other than fastener articles in general, rivets inevitably need to be deformed during their installation. It would thus not be obvious to produce them by a method comprising extrusion moulding, which involves high deformation rates and, as a consequence, results in materials having a high hardness. Since the heat treatment method disclosed in D1 (see for instance claim 1) relates solely to materials produced by extrusion moulding, it was not obvious to apply it to the treatment of a product not obtained by extrusion moulding, such as a rivet. Accordingly, the subject-matter of claim 1 involves an inventive step when starting from D1.

3.2.2 Starting from D2 the claimed method is also not obvious. D2 relates to the problem of improving the resistance to stress corrosion or exfoliation type corrosion in

the area of adjacent metal surfaces and/or fasteners (see column 1, lines 10-24). In order to improve said resistance, D2 teaches the use of a specific curable coating comprising an elastomeric polysulfide polymer and a corrosion-inhibiting, soluble chromate compound (claim 1). In the example of D2 (column 4, line 44-55) the coating is applied to titanium rivets and cured at about 71°C (160°F). The reader of D2 understands that the organic coating is cured under identical conditions when applied to aluminium alloys, in particular to the specific aluminium alloys 7178-T6 and 7075-T6 disclosed in D2 (column 3, line 42-51, column 4, line 21-24).

Starting from the method described in D2 the object to be achieved by the claimed invention can be seen in simplifying the production process of the coated rivet.

Said object is achieved by adopting a coating comprising a phenolic resin and curing it while simultaneously heat treating the aluminium alloy.

D3, E1, E2 and E3 do not relate to the object above. D1, although relating to the problem of increased efficiency, merely aims at increasing "surface protection and beauty" and relates to a process which is not suitable for producing a rivet; since there is no indication in D1 that the coating process can be applied to a rivet and can provide the corrosion resistance required by D2, the person skilled in the art would not combine its teaching with that of D2. Accordingly, none of the documents D3, E1-E3, D1 provides an indication to achieve the object above as claimed, and the claimed solution is not obvious when starting from the method disclosed in D2.

4. *Reimbursement of the appeal fee*

The purpose of the requirement to provide a reasoned decision as laid down in Rule 68(2) EPC 1973 is to enable the appellants and the board of appeal to examine whether the decision is justified or not.

It is true that the appealed decision in the section "Decision of the Opposition Division" under the paragraph "Novelty" merely states that the division cannot identify any single prior art disclosing the features of claims 1 and 25, without explaining the reasons underlying said finding. However, while discussing inventive step (see point 4.4, page 10, last full paragraph), the appealed decision states that D1 applies to extruded material and not fasteners, thus following the argument provided by the appellant I in support of novelty (see the appealed decision, "Facts and Submissions", points 6.1 and 7.2).

Therefore, from the appealed decision as a whole it results that the opposition division followed the argument of appellant I, that D1 is silent as to the production of fasteners. Accordingly, it is possible from the appealed decision to identify the reason behind the finding that the claimed subject-matter is novel in view of D1. Therefore, in the present case no substantial procedural violation can be seen in this respect and it is not justified to reimburse the appeal fee as foreseen by Rule 103(1)(a) EPC.

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 with the order to maintain the patent on the basis of the claims 1 to 16 of the auxiliary request submitted during the oral proceedings, description to be adapted to these claims, drawings 1 to 7 as granted.

3. The request for reimbursement of the appeal fee is refused.

The Registrar: The Chairman:

V. Commare T. Kriner