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**Datasheet for the decision
of 4 December 2013**

Case Number: T 1690/11 - 3.3.01

Application Number: 02003322.1

Publication Number: 1233043

IPC: C09D 5/10

Language of the proceedings: EN

Title of invention:

Particulate metal alloy coating for providing corrosion protection

Patent Proprietor:

Metal Coatings International Inc.

Opponents:

Henkel AG & Co. KGaA
Ewald Dörken AG
Atotech Deutschland GmbH

Headword:

Zinc-containing alloy/METAL COATINGS INT. INC.

Relevant legal provisions:

EPC Art. 123(2)
RPBA Art. 13(3)(1)

Keyword:

"Added matter - (yes) - no clear and no unambiguous disclosure"
"Late-filed submissions - (no) - could have been submitted earlier - not clearly allowable"

Decisions cited:

T 1685/07

Catchword:

-



Case Number: T 1690/11 - 3.3.01

D E C I S I O N
of the Technical Board of Appeal 3.3.01
of 4 December 2013

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Decision under appeal:

Decision of the Opposition Division of the European Patent Office posted on 1 June 2011 revoking European patent No. 1233043 pursuant to Article 101(3) (b) EPC.

Composition of the Board:

Chairman: A. Lindner
Members: J. Ousset
D. Rogers

Summary of Facts and Submissions

- I. The patent proprietor (appellant) filed an appeal against the decision of the opposition division revoking European patent No. 1 233 043.
- II. The appellant submitted the following requests with its statement setting out the grounds of appeal.

Claims 1 and 20 of the main request read as follows:

"1. Coating composition adapted for application to, and curing on, a substrate, which composition contains particulate metal in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided the improvement in the particulate metal constituency of said composition comprising:

zinc alloy in flake form comprising greater than 50 weight percent zinc in said alloy flake and a balance of less than 50 weight percent of non-zinc alloy metal in said alloy flake and a water-reducible organofunctional silane."

"20. A coated substrate protected with a corrosion-resistant coating from a coating composition comprising:

(A) liquid medium

(B) a coating composition according to any of the claims 1-9; and

(C) a hexavalent-chromium-providing substance."

Claim 1 of auxiliary requests I and II is identical to claim 1 of the main request.

Claim 20 of auxiliary request I read as follows:

"20. A coated substrate protected with a chrome-free, corrosion-resistant coating from a coating composition comprising:

- (A) a coating composition according to any of the claims 1-9;
- (B) a titanate polymer; and
- (C) a liquid vehicle comprising organic liquid for said titanate polymer."

Claim 20 of auxiliary requests II and III is identical to claim 20 of auxiliary request I.

Claim 1 of auxiliary request IV reads as follows:

"1. Coating composition adapted for application to, and curing on, a substrate, which composition contains particulate metal in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided the improvement in the particulate metal constituency of said composition comprising:

zinc alloy in flake form comprising greater than 50 weight percent zinc in said alloy flake and a balance of less than 50 weight percent of non-zinc alloy metal in said alloy flake and a water-reducible organofunctional silane, the composition being water-based."

Claim 1 of auxiliary request V reads as follows:

"1. Coating composition adapted for application to, and curing on, a substrate, which composition contains particulate metal in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided the improvement in the particulate metal constituency of said composition comprising:

zinc alloy in flake form comprising greater than 50 weight percent zinc in said alloy flake and a balance of less than 50 weight percent of non-zinc alloy metal in said alloy flake and a water-reducible organofunctional silane, wherein said zinc alloy in flake form contains 85 to 86 weight percent zinc, from 4 to 8 percent aluminum and a balance from 7 to 10 weight percent paste liquid, all basis 100 weight percent of paste, the composition being water-based."

With a further letter of 4 November 2013, a sixth auxiliary request was submitted. Claim 1 of this request reads as follows:

"1. Coating composition adapted for application to, and curing on, a substrate, which composition comprises a paste containing particulate metal and a substituent in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided the improvement in the particulate metal constituency of said composition comprising:

a zinc alloy in flake form wherein the alloy is an alloy of zinc and aluminium, wherein said zinc/aluminium comprises greater than 80 percent zinc, metal basis, or conversely, less than 20 weight percent aluminium, and a substituent which is a water-reducible organofunctional silane."

During oral proceedings, the appellant submitted auxiliary requests Ia, IVa and IVb.

Claim 20 of auxiliary request Ia reads as follows:

"20. A coated substrate protected with chrome-free, corrosion-resistant coating from a coating composition comprising:

- (A) a coating composition according to any of the claims 1-9;
- (B) a titanate polymer wherein said titanate polymer is selected from the group consisting of tetraisobutyl titanate, tetra-isopropyl titanate, tetra N-butyl titanate and mixtures thereof, and said titanate is present in an amount equal to 9 weight percent to 47 weight percent of said metal alloy in flake form; and
- (C) a liquid vehicle comprising organic liquid for said titanate polymer."

Claim 1 of auxiliary request IVa reads as follows:

"1. Chromium-free coating composition adapted for application to, and curing on, a substrate, which composition contains particulate metal in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided

the improvement in the particulate metal constituency of said composition comprising:

zinc alloy in flake form comprising greater than 50 weight percent zinc in said alloy flake and a balance of less than 50 weight percent of non-zinc alloy metal in said alloy flake and a water-reducible organofunctional silane, wherein water is present in the coating composition in an amount from at least 20 weight percent to not above 70 weight percent, basis total composition weight."

Claim 1 of auxiliary request IVb reads as follows:

"1. Chromium-free coating composition adapted for application to, and curing on, a substrate, which composition contains particulate metal in a liquid medium and provides corrosion resistance as a cured coating on said substrate, wherein there is provided the improvement in the particulate metal constituency of said composition comprising:

zinc alloy in flake form comprising greater than 50 weight percent zinc in said alloy flake and a balance of less than 50 weight percent of non-zinc alloy metal in said alloy flake and a water-reducible organofunctional silane."

III. The appellant's arguments can be summarised as follows:

- A basis in the application as originally filed for the expressions "water-reducible organofunctional silane" can be found on page 41.

- In view of the definition present in the description for the word "ingredients", there was no doubt that compositions containing a hexavalent chromium-providing substance comprise water-reducible silanes.
- The presence of a titanate was not excluded in chromium-free compositions. Furthermore, a titanate was disclosed in the description in the presence of silanes.
- "Water-based" is a clear expression and well-known for the person skilled in the art.
- The requests Ia, IV, and IVb were submitted in reaction to the new arguments brought forward by the respondents.

IV. The respondents argued mainly as follows:

- Claim 20 infringed Article 123(2) EPC, since no composition containing a hexavalent chromium-providing substance and a silane was disclosed in the application as originally filed.
- Auxiliary requests Ia, IVa, IVb and VI as well as Mr Dorsett's declaration should not be admitted into the proceedings, since they were late-filed and not clearly allowable. Moreover, the features added to the wording of the claims were taken out of the description.
- The word "silane" was only disclosed for chromium-free compositions.

V. The appellant (patent proprietor) requested that the decision under appeal be set aside, and that the patent be maintained upon the basis of the main request, or alternatively, upon the basis of one of the auxiliary requests I, Ia, II, III, IV, IVa, IVb, V or VI. The main request and auxiliary requests I to V were filed under cover of a letter dated 11 October 2011; auxiliary requests VI was filed under cover of a letter dated 4 November 2013; and auxiliary requests Ia, IVa and IVb were filed at the oral proceedings before the board on 4 December 2013.

VI. The respondents requested that the appeal be dismissed.

VII. At the end of the oral proceedings, the decision of the board was announced.

Reasons for the Decision

1. The appeal is admissible.

2. Added matter

2.1 Claim 20 of the main request

2.1.1 The appellant referred to the description as originally filed (see page 17, lines 10 to 15) and argued that further ingredients, in addition to a chromium-providing substance, can be present. The nature of said ingredients is discussed in the section "chromium-free coating compositions" and it can be more particularly a

silane binding agent (page 11, lines 1 to 3 of the description as originally filed).

2.1.2 The passages cited by the appellant do not refer explicitly to a specific combination of hexavalent-chromium providing agent with a water-reducible organofunctional silane. The expression "hexavalent-chromium providing substance can only be found either on page 5, line 13 in conjunction with a coating composition, which does not contain any silane, or on page 14, lines 6 to 14, according to which hexavalent chromium, if present at all, should not exceed trace amounts, in connection with the expression "chromium-free" or on page 15, lines 23 to 25 in which the hexavalent-chromium providing substance might be a mixed chromium compound or on page 41, lines 22 to 24 where the presence of a water-reducible organofunctional silane excludes the presence of a hexavalent-chromium providing substance (and vice-versa).

2.1.3 In view thereof, the appellant's argument is moot, since it does not point out a clear and non-ambiguous disclosure of the specific combination of a hexavalent-chromium providing substance with a water-reducible organofunctional silane. Consequently, the subject-matter of claim 20 has no basis in the application as originally filed. Therefore, the main request contravenes Article 123(2) EPC.

2.2 Claim 20 of auxiliary request I

2.2.1 The appellant argued that the opponents brought new arguments, which are to be considered as late and

should not be admitted. Moreover, it added that chromium-free compositions do not exclude the presence of a silane (see page 9, lines 9 to 12) and that a titanate binder is disclosed in combination with a silane such as the silanes detailed in connection with the water-reducible, chromium-free coating compositions (see page 19, lines 6 to 8). These passages justify the amendments carried out in claim 20. As to the meaning of the expression "water-reducible", the appellant referred to Mr Dorsett's statement.

2.2.2 These arguments cannot convince the board. It is true that the respondent's arguments should normally be presented with the response to the grounds of appeal (see Article 12(2) of the Rules of Procedure of the Boards of Appeal (RPBA)). However, any amended claims submitted by the appellant must be based on the application as originally filed. Hence, the appellant should be in a position to justify such amendments to the wording of the claims, and to expect that this point will be discussed before the board. Moreover, it is the purpose of oral proceedings to exchange arguments. Without this possibility, holding oral proceedings would amount to a mere repetition of the written arguments of the parties. Mr Dorsett's statement was found not to be relevant and therefore is not admitted into the proceedings (see point 3.1, below). The passage cited by the appellant (see page 19, lines 6 to 8) to support the presence of a silane with a titanate cannot be considered as a basis for the amendments made. This passage mentions that a titanate **binder** undercoating may also contain a silane. However, irrespective of the question whether or not said titanate binder is identical to a titanate polymer as

claimed, the board notes that said passage is located in chapter "C. Titanate Binder Coating Composition" which is not linked to chapter "A. Chromium-Free Coating Composition" (the reference to chromium-free coating compositions on page 19, lines 6 to 8 only concerns the silanes disclosed therein, but not chromium-free coating compositions as such). As a consequence, the combination of the features chromium-free, corrosion-resistant coating plus water-reducible organofunctional silane plus titanate polymer has no basis in the application as originally filed.

2.2.3 Claim 20 of auxiliary request I contravenes Article 123(2) EPC.

2.3 Claim 20 of auxiliary requests II and III

2.3.1 The wording of claim 20 in these requests is identical to that of the first auxiliary request. Therefore, the same conclusion is applicable for these claims and consequently, claim 20 of these requests contravenes Article 123(2) EPC.

2.4 Claim 1 of auxiliary request IV

2.4.1 The appellant observed that the argument presented by the respondents against the admissibility of claim 1 was put forward for the first time during oral proceedings. It was also added that the expression "water-based" was well-known by the skilled person and that it means a substantial amount of water. Furthermore, chromium-free compositions containing water are mentioned in the description (see page 9, lines 20 to 21). Since these compositions can also

contain a silane substituent, claim 1 as amended is based on the application as originally filed.

2.4.2 In relation to the appellant's observation as to the new argument presented for the first time, the board refers to point 2.2.2 above. The expression "water-based" is present in the application as originally filed (see page 16, line 6 and page 17, lines 5 to 6). However, these mentions of "water-based" are under the heading "chromium-containing coating composition" and no mention of the presence of a "water-reducible organofunctional silane" can be found in the description under the same heading. There is nothing in the application as originally filed which allows the board to conclude that the amounts of water mentioned on page 9, lines 20 to 21 are tantamount to the expression "water-based". Even considering that these amounts of water mentioned on page 9, lines 20 to 21 amount to the expression "water-based", it remains that these are disclosed under the heading "chromium-free coating composition". The composition claimed in claim 1 is not limited to a chromium-free composition. Hence, the combination of these two features, namely "water-based" and "water-reducible organofunctional silane" in claim 1 cannot be considered to be directly and unambiguously derivable from the application as originally filed. Even the last paragraph of the description (see page 41, lines 22 to 25) does not describe such a combination, since it is necessary to make two choices to arrive at this combination, namely the choice between "water-based" and "solvent-based" and the further choice of "water-reducible organofunctional silane" among the four options listed in these lines.

2.4.3 Claim 1 of auxiliary request IV contravenes Article 123(2) EPC.

2.5 Claim 1 of auxiliary request V

2.5.1 The wording of claim 1 in this request also mentions the presence of a "water-reducible organofunctional silane" in a "water-based" composition. It also contravenes Article 123(2) EPC for the same reasons recited above in point 2.4.

3. Admissibility of the late-filed documents

3.1 Mr Dorsett's declaration

3.1.1 This declaration was submitted with letter of 7 November 2013 and is therefore considered as late-filed. Its admissibility is thus a matter of the discretion of the board (Article 13(1) RPBA).

3.1.2 In this declaration, Mr Dorsett explains the proper understanding of the term "water-based" in the sense of the invention as well as the meaning of the term "ethyl silicate" and "functional silanes". This declaration represents Mr Dorsett's opinion, which is not to be considered as identical to the skilled person's general knowledge. Moreover, the meaning of these terms has no relevance for the assessment of the allowability of the appellant's amendments. Hence, this late-filed declaration is not relevant for the case and therefore not admitted into the proceedings.

3.2 Auxiliary request Ia

3.2.1 This request was filed during oral proceedings by the appellant once the board indicated that claim 20 of auxiliary request I contravened Article 123(2) EPC. It is thus regarded as late-filed.

3.2.2 The appellant contended that this late-filing was made in reaction to the respondent's arguments presented during oral proceedings and could thus not be submitted earlier.

3.2.3 The board does not agree with the appellant's arguments. When a party (here the appellant) submits an amended claim request, it cannot allege to be surprised by objections raised by the other party (here the respondents) or by the board in connection with the formal admissibility of the amended set of claims. Therefore, when amendments are made, the party (here the appellant) should be prepared to justify these amendments in view of the formal objections which can be raised according to Articles 123(2) (3), 84 and Rule 80 EPC. The fact that amendments made during the appeal proceedings were found not to meet the requirements of Article 123(2) EPC, as is the case for claim 20 of auxiliary request I (See point 2.2 above), does not automatically justify the submission of a further auxiliary request during oral proceedings before the board. The board further points out that, in independent claim 20 of auxiliary request Ia, under the heading "polymer titanate", tetra-isopropyl titanate is included. This compound, being a monomer, cannot be considered as a polymer and therefore, renders the clarity of this claim questionable. For these reasons,

the board does not admit auxiliary request Ia into the proceedings, since it is not clearly allowable (Article 13(3) RPBA).

3.3 Auxiliary request IVa

3.3.1 This request was filed during oral proceedings once the board has indicated that claim 1 of auxiliary requests IV and V contravened Article 123(2) EPC. It is thus late-filed.

3.3.2 The appellant submitted that this request is in agreement with the requirements of Article 123(2) EPC, since the basis for the amendments carried out is to be found on page 9, lines 9 to 24 of the description as originally filed.

3.3.3 The amendments performed by the appellant amount to the introduction into claim 1 of features taken out of the description. At this late stage of the proceedings, such amendments can only be regarded as surprising for the respondents. Furthermore, the replacement of the expression "water-based" by the amount of water mentioned on page 9, lines 20 to 21 can only aim at clarifying the term "water-based". However, this had already been objected to by respondent III in its reply to the statement of the grounds of appeal (see point 3.1 of its letter of 27 April 2012). The appellant did not provide any reason which could justify this late amendment which could have been made earlier. For these reasons, the board does not admit this request into the proceedings.

3.4 Auxiliary request IVb

3.4.1 This request was also submitted during oral proceedings and is thus late-filed. Moreover, it diverges from the scope of the previous request, namely auxiliary request IVa, since the expression "water-based" has been deleted and not replaced by any other expression or limiting feature. This deletion renders the scope of auxiliary request IVb broader than auxiliary request IVa. Higher ranking auxiliary requests III, IV and IVa, which were submitted by the appellant, indicated that the invention aimed at was a composition containing among other things a "water-reducible organofunctional silane" and water. The current request submitted shortly before the closing of the debate clearly relates to another type of composition in which the presence of water is no longer compulsory. This could neither be expected by the respondent nor by the board and represents at this late stage of the proceedings a reason for the board not to admit this request (see T 1685/07, point 6 of the reasons).

3.5 Auxiliary request VI

3.5.1 This request was filed one month before oral proceedings. It is also considered as late-filed and its admissibility is within the discretion of the board.

3.5.2 This request was submitted without the appellant referring either to the grounds of appeal which were supposed to be overcome by this request, or why this request could not have been filed earlier. Furthermore, the feature introduced into claim 1 was taken from the description and not from a dependent claim. In the

absence of any arguments on these points by the appellant, the board decides not to admit this request, considering that it could have been filed earlier.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

M. Schalow

A. Lindner