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**Datasheet for the decision
of 11 December 2020**

Case Number: T 1099/16 - 3.2.06

Application Number: 08797940.7

Publication Number: 2337889

IPC: D07B1/16, C08J5/10

Language of the proceedings: EN

Title of invention:

Use of an adhesion enhancer in a polymer jacket material of a metal cord and corresponding method of making a cord assembly comprising a jacket

Patent Proprietor:

Otis Elevator Company

Opponent:

Inventio AG

Headword:

Relevant legal provisions:

EPC Art. 100(a), 56, 112(1)(a), 21(4)
EPC R. 99(2)
RPBA 2020 Art. 9
RPBA Art. 12(4)

Keyword:

Grounds for opposition - Inventive step - use claim - new technical effect - functional feature (yes)
Referral to the Enlarged Board of Appeal - (no)
Competence of the boards of appeal - composition of the board of appeal - enlargement (no)
Admissibility of appeal - appeal sufficiently substantiated (yes)

Decisions cited:

G 0002/88, G 0001/03, G 0010/91, R 0003/12, T 0208/88,
T 1329/04, T 0184/16, T 0488/16, T 1322/17

Catchword:

In order to decide whether a claim to the use of a known compound for a particular purpose, based on a technical effect which is described in the patent, should be interpreted as including that technical effect as a functional technical feature according to G 2/88, the Board finds that G 2/88 does not require the technical effect to be described in the patent in a manner sufficiently clear and complete to make the actual achievement of that technical effect credible (Reasons 17).

This finding applies even to a case where the ground for opposition under Article 100(b) EPC cannot be considered in the appeal proceedings (Reasons 24).

If, for the assessment of inventive step, it has to be determined whether the purpose defined in the claim can be interpreted as a limiting functional feature, the question whether the technical effect is described in the patent merely involves considering whether a skilled person can recognise what technical effect underlies the new purpose claimed (Reasons 20).



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Case Number: T 1099/16 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 11 December 2020

Appellant: Inventio AG
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Respondent: Otis Elevator Company
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 25 February
2016 rejecting the opposition filed against
European patent No. 2337889 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman M. Harrison
Members: T. Rosenblatt
W. Ungler

Summary of Facts and Submissions

I. The appellant (opponent) filed an appeal against the decision of the opposition division rejecting the opposition against European patent No. 2 337 889.

II. Claim 1 of the patent in suit has the following wording:

"Use of at least one of melamine cyanurate, melamine-phosphate, melamine-pyrophosphate or melamine-polyphosphate as an adhesion enhancer in an elevator load bearing member (26), a passenger conveyor drive member (56), or a passenger conveyor handrail (48), the load bearing member, drive member or handrail comprising:

at least one elongated metal tension member (32); and a jacket (34) covering at least some of the at least one elongated metal tension member (32), wherein the jacket (34) comprises a polymer material and the adhesion enhancer mixed in the polymer material, the adhesion enhancer facilitating adhesion between the at least one elongated metal tension member (32) and the jacket (34)."

The patent in suit also comprises a second independent claim (claim 9). In its letter dated 9 March 2020, the appellant declared that it withdrew its appeal in as far claim 9 and its dependent claim 10 were concerned, so that the wording of claim 9 is not reproduced here.

III. In the impugned decision, the opposition division considered that none of the opposition grounds raised in the notice of opposition under Article 100(c) EPC and under Articles 100(a) in combination with 54 and 56

EPC prejudiced maintenance of the patent in suit.

The impugned decision refers *inter alia* to the following documents:

D1 : WO-A-2007/055701,
D7 : DE-U-29 924 773,
D10 : EP-A-1 927 608,
D11: "Melamine derivatives", from URL:<http://web.archive.org/web/20071022175659/http://specialchem4polymers.com/tc/Melamine-Flame-Retardants/index.aspx?id=4004>, 2007-10-22,
D17 : EP-A-1 441 001,
D18 : WO-2007/068599,
D20 : EP-A-0 617 079,
D21 : EP-A-1 624 105.

In particular in the context of an objection based on D7 as the closest prior art, the opposition division held, with reference to decision G 2/88 of the Enlarged Board of Appeal, that claim 1 was functionally limited by the adhesion enhancing effect of the claimed compounds, which effect moreover was considered to be disclosed in the patent (middle of page 13 of the impugned decision). The opposition division also concluded that certain other objections under Article 56 EPC based on *inter alia* D1 as the closest prior art were not sufficiently substantiated in the notice of opposition.

IV. With its appeal grounds the appellant objected based on the ground of opposition under Article 100(b) EPC and argued that the claimed effect for the melamine derivatives to act as an adhesion enhancer and to facilitate adhesion between the at least one elongated metal tension member and the jacket was not

sufficiently disclosed in the patent. In support of its argument that the patent did not contain any proof of the effect underlying the new use, the appellant submitted seven annexes as evidence, denoted A1 to A7 (later not longer relied upon, see below IX.). Concerning inventive step, the appellant argued that, as a consequence of the lack of proof, the adhesion enhancing effect could not be considered as a limiting functional feature, and submitted that the subject-matter of claim 1 was obvious based on D1 or D7 as the closest prior art, essentially in combination with common general knowledge, as evidenced by D11 or

D24 : extract from "Plastics Additives Handbook", H. Zweifel 2001 (submitted with the grounds of appeal)

or with D8, D10, D17, D18, D20, D21 or

D23 : US 2003/0166749 (also submitted with the appeal grounds).

- V. In its reply, the respondent contested *inter alia* the admissibility of the appeal and objected to the introduction of the opposition ground under Article 100(b) EPC, as well to the admittance of the new evidence submitted with the grounds of appeal and of the objections under Article 56 EPC based on D1 as the closest prior art.
- VI. With a subsequent letter, the appellant submitted further arguments in regard to the ground for opposition under Article 100(b) EPC and also the ground for opposition under Article 100(a) in combination with Article 56 EPC. It also raised yet another ground for opposition under Article 100(a) in combination with Article 57 EPC. It was further argued that the Board

had to examine the impugned decision in its entirety, including all relevant lines of argument in regard to inventive step.

VII. The parties were summoned to oral proceedings before the Board. In a communication, dated 24 February 2020, pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2020), the Board opined *inter alia* that the appeal was admissible. Referring to Articles 12(1), (2), (3) and 13(1) RPBA 2020, the Board stated that the review of the impugned decision would be limited to those reasons given in the statement of grounds of appeal, in particular in regard to those objections substantiated in the grounds of appeal concerning the opposition ground of lack of inventive step (points 9.2.1-9.2.3, *ibid.*). The fresh opposition ground under Article 100(b) EPC raised in the appeal grounds would not be considered in the appeal proceedings, due to the lacking consent of the respondent to its introduction. The Board also pointed out that the introduction of the further fresh ground for opposition under Article 100(a) in combination with Article 57 EPC would similarly depend on whether the respondent consented thereto (point 9.2.4, *ibid.*).

Referring to Article 12(4) RPBA 2007, the Board also indicated that it provisionally intended to hold inadmissible certain evidence filed with the appeal grounds, namely A1 to A7, and D23 and D24 including the objections based on these, as well as the objections under Article 56 EPC based on D1 as the closest prior art (points 10.2.2 to 10.2.4, *ibid.*).

Concerning inventive step based on D7 as the closest prior art, the Board noted that it was undisputed that the particular claimed effect of the melamine

derivatives did not belong to the skilled person's common general knowledge and that the prior art cited in the proceedings did not disclose same. The case of inventive step therefore appeared to hinge on the question as to whether or not the intended purpose "adhesion enhancer" could be considered as a limiting functional feature according to G 2/88 (cf. point 11 of the Board's communication).

VIII. With its subsequent letters dated 27 February 2020, 9 March 2020, 28 July 2020, 5 November 2020 and 16 November 2020, the appellant submitted additional arguments and requested that the Board be enlarged by a Board member trained in chemistry and that a question be referred to the Enlarged Board of Appeal. It also filed further evidence denoted A8-A10. The respondent in turn submitted (with its letters of 28 July 2020 and 3 December 2020) auxiliary requests 1 to 3.

IX. Oral proceedings before the Board were held on 11 December 2020, in the course of which the appellant withdrew its objections under Article 100(b) EPC and under Article 100(a) in combination with Article 57 EPC. The appellant also declared that it did not rely on any of A1 to A10 for the purpose of its objections under Article 100(a) in combination with Article 56 EPC. Further, the following question to be referred to the Enlarged Board of appeal was submitted:

"Ist G 2/88 dahingehend auszulegen, dass der im Patent beschriebene technische Effekt tatsächlich vorhanden sein muss und muss das Erzielen dieses technischen Effekts in den ursprünglichen Anmeldungsunterlagen plausibel beschrieben sein?"

- X. The appellant requested that the decision under appeal be set aside and the patent be revoked.

Furthermore, the appellant requested that

- a) the Board be enlarged by a chemically qualified member,
- b) the question submitted during the oral proceedings of 11 December 2020 be referred to the Enlarged Board of Appeal,
- c) the patent proprietor's first to third auxiliary requests not be admitted into the proceedings.

- XI. The respondent requested that the appeal be dismissed.

- XII. The arguments of the appellant may be summarised as follows.

Enlargement of the Board

The Board should be enlarged by a Board member qualified in chemistry because the question of whether the feature defining the use of the melamine derivatives as an adhesion enhancer could be seen as a technically limiting feature in the sense of G 2/88 involved the assessment of questions in the field of molecular chemistry. In particular, the reasons given in 9.1 of G 2/88 required the assessment of whether the melamine derivatives in fact achieved the effect, which was contested on the basis of the evidence A1 to A10 submitted during the appeal. The only potentially new or inventive feature of the claim was a chemical property of the melamine derivatives. The credibility of the alleged change of the polar interaction between the polymer jacket and the metallic cord surface due to the presence of the melamine derivative(s) required an assessment by a chemist. Moreover, the consistent case

law suggesting that such unproven or implausible effects could not be taken into account in the examination of inventive step and called for a broader formulation of the objective technical problem, see for example T 355/97, T 1797/09, T 488/16, T 1322/17, T 1329/04 or T 184/16, was developed by the Boards of Appeal in the chemistry fields, so that these Boards were more familiar with the issues involved. Parallel proceedings in the USA and in Japan revealed that the chemical features of the claim had already been misunderstood.

Inventive step

The subject-matter of claim 1 lacked an inventive step starting from D1 or D7 as the closest prior art. The technical effect of the melamine derivatives defined in claim 1, of acting as an adhesion enhancer, was not plausibly described to be actually achieved in the patent. None of the assumed reasons for the adhesion enhancing effect described in paragraphs 27 to 29 of the patent was credible, as confirmed by the submitted evidence A1-A10 (as mentioned above, the appellant ultimately did not rely on this evidence). The claimed effect therefore did not constitute a functional feature within the meaning of G 2/88. This decision required that the description of the claimed new effect in the patent had to be such as to prove that the effect was actually achieved. Only if this was sufficiently proven by the description, could the effect be taken into account. These principles were confirmed in decisions T 488/16, T 1322/17, T 1329/04 or T 184/16, which constituted a further development of G 2/88. To confirm this interpretation of G 2/88, the question submitted during the oral proceedings should be referred to the Enlarged Board of Appeal. Since the

condition of a "description" in the patent was not fulfilled, the claimed effect did not constitute a limiting functional feature and therefore had to be ignored. Thus, starting from D7 as the closest prior art, a single distinguishing feature could be identified, namely the specific melamine derivatives. The use of these derivatives for the purpose of acting as a flame retardant was however part of common general knowledge, confirmed by a number of documents cited in the appeal proceedings. The subject-matter of claim 1 was hence obvious in regard to the skilled person's common general knowledge or with regard to the prior art documents cited in the appeal grounds.

XIII. The arguments of the respondent may be summarised as follows.

Admissibility

The appeal should be dismissed as inadmissible for non-compliance of the appeal grounds with Rule 99(2) EPC due to a lack of a causal relationship of the statements in the grounds of appeal with the findings of the impugned decision. In this respect, and in regard to the appellant's arguments concerning inventive step, the appellant had based its case, on the one hand, on combinations of documents which were not found to be detrimental to inventive step, without, however, giving reasons why the decision was incorrect and, on the other hand, on (partly even unsubstantiated) new lines of argument without justification for their submission only at the appeal stage. The new evidence submitted with the appeal grounds lacked relevance, in particular when compared to the evidence already on file.

Enlargement of the Board

The EPC and the Rules of Procedure did not foresee the supplementing of a Board of Appeal with one additional member. Without explicitly referring to it, the EPC reflected the German concept of the right to a statutory judge; it was not up to the parties to determine the composition of the Board. The issues to be decided concerned essentially questions of law, in particular the interpretation of G 2/88 and the interpretation of claim 1. A decision on certain technical matters, such as the question on whether the explanations in the description were plausible causes of the claimed effect, was not even required. The outcome in other national proceedings should anyway not affect the present proceedings.

Inventive step

The objections under Article 56 EPC to be considered by the Board should be limited to those which had been subject to the impugned decision, and thus restricted only to objections based on D7 as the closest prior art in combination with only certain of the documents referred to by the appellant. The feature "adhesion enhancer" constituted a functional feature of claim 1 according to the principles developed in G 2/88. It was described in the patent, see for example paragraph 23. The technical effect of adhesion enhancement was not known in the prior art for the claimed melamine derivatives, as also confirmed by the appellant.

G 2/88 required nothing more than a description of the technical effect in the patent. A description should comply with Rule 42 EPC. A plausible explanation for the effect being actually achieved was not required in

order to recognise the effect as a limiting feature in line with G 2/88. Also, in case T 208/88, a similarly broad claim was considered to be described in the description without requiring any plausibility of the claimed effect. The other decisions cited by the appellant lacked relevance because they were based on different facts. In particular T 488/16, amongst others, dealt with claims directed to a substance without defining any technical effect in the independent claim. A referral of the appellant's question to the Enlarged Board was not necessary since it was not relevant for the decision to be taken by the Board.

Reasons for the Decision

Admissibility of the appeal

1. The admissibility of the appeal was challenged by the respondent based on an alleged failure of the statement of grounds of appeal to comply with Rule 99(2) EPC. For the reasons set out below, the Board concludes however that the requirements of Rule 99(2) EPC are met. The Board is also satisfied that all other requirements for the admissibility of the appeal have been met, noting that the respondent also did not raise any objections in that regard.

The appeal is thus admissible.

2. According to Rule 99(2) EPC the appellant shall indicate in the statement of grounds *inter alia* the reasons for setting aside the decision impugned.

3. In its communication pursuant to Article 15(1) RPBA 2020, the Board preliminarily opined that the requirements of Rule 99(2) EPC appeared to be met for the reasons given below.
 - 3.1 In the case of an appeal against the rejection of an opposition, there is no reason that an appellant-opponent must rebut all issues decided by the opposition division against it. As long as the appellant sets out reasons in the appeal grounds concerning at least one of the opposition grounds considered in the impugned decision which, if found convincing by the Board, could result in setting aside the decision, the requirement of Rule 99(2) EPC is generally considered to be met.
 - 3.2 Despite the new facts and evidence, including a new opposition ground, raised in the appeal grounds - and leaving aside the issue of possible inadmissibility of the new evidence, new facts and objections submitted for the first time in the appeal - the appellant essentially contested in section II of the appeal grounds a crucial point concerning the division's conclusions on inventive step, namely the consideration of the intended purpose, "use of ... as an adhesion enhancer", as a limiting functional feature in claim 1, see reasons 4.4.1 of the impugned decision, page 14, top paragraph. As a conclusion of its arguments, the appellant stated that the claimed purpose could not be seen as constituting a distinguishing functional feature of the claim. According to the appellant's objections on lack of inventive step (points 21 and 24 on page 10 of the appeal grounds), the claimed use therefore had to be ignored, leading to the formulation of a less ambitious technical problem (see appeal grounds, points 24 and 27). Further, even the objection

raised in point 27 of the appeal grounds would by itself have resulted in the appeal being admissible, as it relied on the resulting different interpretation of claim 1 and the reformulated problem, which was based on a combination of prior art dealt with in the impugned decision (see Reasons 4.4.1); if these reasons had been found convincing by the Board, the impugned decision would have had to have been set aside.

Therefore the requirements of Rule 99(2) EPC are met.

4. The respondent did not submit any further arguments on this issue and stated during the oral proceedings that it relied solely on its written submissions. The Board therefore had no reason to deviate from its preliminary opinion which is hereby confirmed, leading to the decision on the admissibility of the appeal stated above.

Request for enlargement of the Board

5. The Board refused the appellant's request to enlarge the Board by a Board member qualified in chemistry for the reasons given below.
6. Article 21(4) EPC sets out the composition of the Board for appeals from a decision of an Opposition Division to consist of:

(a) two technically qualified members and one legally qualified member, when the decision was taken by an Opposition Division consisting of three members;

(b) three technically and two legally qualified members, when the decision was taken by an Opposition Division consisting of four members, or

when the Board of Appeal considers that the nature of the appeal so requires.

It was not contested that the Board's composition was in conformity with Article 21(4) (a) EPC.

Article 9 RPBA 2020 stipulates the condition for enlargement of a Board composed according to Article 21(4) (a) EPC:

If a Board consisting of two technically qualified members and one legally qualified member considers that the nature of the appeal requires that the Board should consist of three technically qualified members and two legally qualified members, the decision to enlarge the Board shall be taken at the earliest possible stage in the examination of that appeal.

Further, the Business Distribution Scheme of the Technical Boards of Appeal for 2020 (OJ EPO 2020, Supplementary Publication 1, 15-28) considers, in Article 3 as follows:

- (1) The Chairman shall determine the composition of the Board responsible for deciding it from amongst the Board members.
- (2) In determining the composition the Chairman shall in particular take account of the workload of each member and the technical and language requirements of the case.
- (3) If the circumstances of the appeal make it necessary, the Chairman shall designate a technically qualified member from another Board. In so doing ...

7. It is clear from the two provisions cited from the EPC and the RPBA that the enlargement of the present Board composed according to Article 21(4) (a) EPC, by the addition of a single technically qualified member, of whatever technical background, is not foreseen in the EPC.

8. However, even if the request would have been understood to be directed to the enlargement by a further technically qualified member, with (specialist) knowledge in chemistry, and a second legally qualified member, as first argued by the appellant during the oral proceedings, the Board found no reason that it should be so enlarged.
 - 8.1 This possibility is formally provided for in Article 3 of the Business Distribution Scheme of the Technical Boards (see above).

 - 8.2 Turning to the composition in the present case, it should first be noted that the issues at hand to be decided by the Board are primarily of a legal nature. In particular, the statements made by the Enlarged Board of Appeal in Reasons 9.1 of its decision G 2/88 (OJ EPO 1990, 93) require interpretation in order to decide on the subsequent question of whether the claimed use in the present case constitutes a limiting functional feature.

Further, if consideration of the technical issues might have arisen beyond these legal issues, the Board cannot see that the underlying matter would have required particular knowledge of molecular chemistry. The technical concepts of adhesion and polarity of molecules belong to common technical university education, not least in the field of mechanical

engineering. No reason is evident why the Board's technical competence would be unable to deal with any technical matters arising in this case. Additionally it is noted, as also held by the Enlarged Board of Appeal in R 3/12 (unpublished), Reasons 2.4, that, for the sake of argument, even if the Board's decision were finally based on an imperfect understanding of the technical issues, this would have no implications for the technical qualifications of the Board members in the sense of Article 21 EPC, since this provision only implies a prescribed course of technical education of the members rather than providing a guarantee of an unquestionable understanding of a specific case. There is also no particular case law deriving from the Boards of Appeal in the field of chemistry which the present Board would not be aware of or be unable to apply where fitting. Consequently it was concluded that the nature of the appeal did not require the Board to be complemented by additional Members.

For the sake of completeness: the Board cannot infer from decisions T 355/97 and T 1797/09, cited by the appellant in this context, anything of relevance to alter the Board's conclusion. These decisions do not deal with the competence of technical Members to decide on certain issues.

Inventive step

9. In its appeal grounds, the appellant raised an objection under Article 56 EPC based on *inter alia* D7 as the closest prior art to the subject-matter of claim 1 of the impugned patent. It is common ground between the parties that D7 does not disclose the specific melamine derivatives defined in claim 1 for their specific use as an adhesion enhancer facilitating

adhesion between an elongated metal tension member and (surrounding) polymer jacket. Instead, D7 discloses in paragraph 40, phosphor ester, melamines and halogens as a flame retardant in a polymer jacket of an elevator load bearing member.

10. It is also undisputed that the specific melamine derivatives defined in claim 1 are known compounds commonly used as flame retardants in polymers (see for example D11 or D24). The use of any of the specific melamine derivatives instead of melamine in a polymer jacket of D7 for their well known flame retardant effect would thus not appear to involve an inventive step.

11. However, the use of these melamine derivatives as an adhesion enhancer is not known in the prior art, as also acknowledged by the appellant (see for example point 23 of the appeal grounds). Their use as an adhesion enhancer could thus be considered to involve an inventive step, on the proviso that this use were acknowledged to be a limiting functional feature of the claim within the meaning of the Enlarged Board of Appeal decision G 2/88 (OJ EPO 1990, 93). The appellant essentially disputed that the new use (adhesion enhancer) of the known compounds (melamine cyanurate, melamine-phosphate, melamine-pyrophosphate, melamine-polyphosphate) could be considered as a limiting functional feature of the claim according to G 2/88, because the effect of acting as an adhesion enhancer was not sufficiently described in the patent.

The Board therefore had to assess which conditions were imposed by G 2/88 in order to acknowledge a new technical effect as a limiting functional feature of the claim.

12. Three questions were referred to the Enlarged Board in decision G 2/88. The first two questions concerned the proper interpretation of Article 123(3) EPC, based on an amendment made during opposition proceedings involving a change of "category" of the claims. The third question referred to it concerned the proper interpretation of Article 54 EPC, with particular reference to a use claim where the novel feature lay in the purpose of such use (see Summary of the Procedure I.iii) and Reasons 1, *ibid.*).

Point 3 of the Headnote of the decision states the Enlarged Board's answer to the third question:

"A claim to the use of a known compound for a particular purpose, which is based on a technical effect which is described in the patent, should be interpreted as including that technical effect as a functional technical feature, and is accordingly not open to objection under Article 54(1) EPC provided that such technical feature has not previously been made available to the public."

13. The Board considers that this conclusion establishes two conditions for interpreting a claimed new purpose (reflecting a new technical effect) as a functional technical feature of the claim which may serve to distinguish the subject-matter over the prior art. Besides the condition that the technical effect has not been made available to the public before the relevant priority date of the application at issue, it is also required that the technical effect in which the claimed use resides, is "described" in the patent (see also T 208/88 OJ EPO 1992, 22, Reasons 1).

14. The first condition (i.e. that the technical effect had not been made available to the public before the priority date) is met in the present case. Whilst the appellant argued that the effect as such did not occur, or if it did it was not clear to what extent, it did not argue that the technical effect had in some way been made known to the public before the relevant priority date.

15. The second condition ("the new technical effect underlying the new purpose being described in the patent") was, first, considered to be met by the opposition division (see impugned decision page 13, lines 15/16, 19/20). The appellant did contest that this condition was met. The present decision thus hinges on the interpretation of the expression "described in the patent" used in G 2/88. The two extremes which are conceivably covered by this expression appear to be, on the one hand, i) that the new technical effect must be described in the patent to such an extent that the skilled person understands that the effect is indeed achieved or that the effect is at least plausible, as essentially argued by the appellant as being the relevant standard, or, on the other hand, ii) that the wording of the technical effect is only required to be supported, e.g. merely stated in the description.

Option i) would correspond in essence to the requirement of sufficient disclosure as set out in Article 83 EPC or as analogously formulated in the ground for opposition under Article 100(b) EPC. Option ii) resembles the condition of support of the claims by the description according to Article 84 EPC.

16. Neither a clear definition nor the precise limits of the expression "described in the patent" (see e.g. Headnote 3 and Reasons 10.3) in the context of claim interpretation can be derived from the Reasons of G 2/88.

The significance of the description in regard to the features defined in the claims emerges only in the context of claim construction and the determination of whether a limiting feature has indeed been included. The considerations of the Enlarged Board, notably those in Reasons 6 to 9.1, leading to its conclusion in Reasons 10.3, condensed in the above cited Headnote 3, focus on the proper construction of the claim wording as a prerequisite for then deciding on novelty of the claimed subject-matter of a claim which includes a limiting feature of use. The purpose of proper claim construction is to determine those technical features of the claim which may serve to distinguish its subject-matter from the prior art (Reasons 7).

17. There is, however, no pointer in the Enlarged Board's considerations suggesting that an assessment of the plausibility or credibility of the actual achievement of the claimed technical effect on the basis of the patent's description would be required when performing the task of claim construction, i.e. when examining whether a claimed new technical effect should be understood as a limiting functional technical feature of a use claim.
18. Nor can the Board find any indication in G 2/88 that would require a description in conformity with the conditions set out in Rule 42 EPC for this purpose, as argued by the respondent.

19. The Board is also not aware of e.g. a large body of case law which would have elaborated on the question of the meaning of "described in the patent" in G 2/88. In decision T 208/88 (*ibid.*), already cited above, the deciding Board considered it sufficient that the new effect was already cited in the originally filed claim 1 and in the first sentence of the original description, as well as in some further paragraph of the description in which reference was made to the compounds "strong growth regulating properties" (Reasons 2). This, however, does not amount to a particular high standard on the details of the description, let alone in regard to the credibility of the achievement of the respective technical effect.
20. The Board concludes that the extent to which a new technical effect underlying the claimed new purpose must be "described in the patent" for the exercise of construing the wording of a claim indeed does not involve considerations of whether the technical effect is sufficiently credibly or plausibly described in the patent, but merely whether it has been described in the sense that a skilled person can recognise what technical effect is underlying the new purpose claimed. Whether the extreme case of a mere repetition of the wording of the claim might be considered to meet this condition (as argued by the respondent), which could be seen almost to be supported by T 208/88, can nevertheless be left unanswered (see below). The decision whether a technical features of a claim can be considered to be described in the patent therefore remains to be decided on the facts of the individual case.
21. In fact, in the present case the Board comes to the same conclusion as the opposition division which

considered that the new technical effect underlying the claimed new use of the specific melamine derivatives as an "adhesion enhancer" is indeed described in the patent, and also beyond a mere repetition of the wording of claim 1. Paragraph 2 of the patent sets out the general purpose pursued by the patent, namely to improve the pull-out strength of the tension member from the jacket material of a load bearing assembly. Paragraph 4 then indicates that the subject-matter of the present "application", i.e. patent, is the use of the specific melamine derivatives as an adhesion enhancer for different load bearing or load transmitting appliances. The inventive use is then described generally in paragraph 7 as facilitating the adhesion between the tension member and the jacket. Specific examples of the claimed use of these compounds for the defined purpose are given in the detailed description from paragraph 17 onwards. With reference to the embodiments of, for example Figures 2, 3, 6 and 7, paragraphs 21, 23, and 25 describe the use of the derivatives in different appliances. cursory explanations of the assumed technical causes, i.e. the technical effects leading to the adhesion enhancement are given in paragraph 27, whereas paragraphs 28 and 29 indicate exemplary relative amounts of adhesion enhancers to be used for the preparation of the polymer composition constituting the polymer jacket around the tension member in order to achieve the adhesion enhancement and an even roughly quantified increase of the adhesion strength (column 4, line 45), all pointing to the technical effect of adhesion enhancement.

The claimed new purpose is thus described as the newly discovered technical effect of the melamine derivatives in the polymer jacket surrounding the load bearing member.

That the causes, mentioned for example in paragraph 27, might not plausibly explain such a technical effect of adhesion enhancement, does not contradict the fact that the purpose, which is based on a newly discovered technical effect, is indeed described.

The Board can concur with the appellant in so far as the description does not comprise any complete examples, i.e. specific polymer preparations detailing exact amounts of one or all of the specific melamine derivatives in a specific polymer composition employed on a tension member of specific composition, let alone comparative data which would demonstrate the adhesion enhancing effect of the melamine derivatives in such polymer jackets. Nevertheless the Board finds that the content of the passages referred to hereabove constitute a description of the new purpose based on a newly discovered technical effect attributed to the known compounds.

22. The Board thus concludes that the claimed new use based on the new technical effect of the known melamine derivatives is "described in the patent" as required by G 2/88. As set out specifically in Reasons 10.3, which summarises the Enlarged Board's conclusion on the third question, condensed further in its order and Headnote 3, the attaining of such a technical effect should then be considered as a functional technical feature of the claim.
23. The arguments of the appellant submitted to contest that the claimed new use was described in the patent in accordance with G 2/88 are found unconvincing for the following reasons.

24. The essence of the appellant's contention amounts to an examination of the requirement of sufficiency of disclosure, which is however a separate ground for opposition, Article 100(b) EPC. This opposition ground was not raised before the opposition division. Following the appellant's understanding of the expression "described in the patent" (i.e. that the description had to sufficiently disclose the use such that it could be carried out by a skilled person across the scope of the claim), and which was submitted also for the first time only on appeal, would therefore be tantamount to introducing this opposition ground via the back door. Such would clearly be contrary to the Case Law established by the Enlarged Board of Appeal in its decision G 10/91 (OJ 1993, 420). The respondent also did not give its consent to the introduction of that ground for opposition, raised for the first time in the appeal grounds and subsequently withdrawn by the appellant during the oral proceedings before the Board. It may thus not be dealt with in substance (see G 10/91, Reasons 18).

25. The Board additionally refers in this regard to the decision of the Enlarged Board of Appeal decision G 1/03 (OJ 2004, 413). In Reasons 2.5 the Enlarged Board considered the question of whether non-working embodiments encompassed by a claim could justify the use of disclaimers to exclude such subject-matter. The Enlarged Board rejected this possibility. Reasons 2.5.2 addresses the possible consequences arising from non-working embodiments. The Enlarged Board held *inter alia* (text in brackets and underlining added by the present Board):

"If this [sufficient information in the patent] is not the case and there is lack of reproducibility

of the claimed invention [as essentially alleged by the present appellant], this may become relevant under the requirements of inventive step or sufficiency of disclosure. If an effect is expressed in a claim [as in the present case, adhesion enhancer], there is lack of sufficient disclosure [which is not a ground for opposition in the present case]. Otherwise, ie if the effect is not expressed in a claim but is part of the problem to be solved, there is a problem of inventive step...".

These considerations can be understood as applicable to the present case. The appellant in the present case has argued essentially that the claimed effect does not occur. This contention may be seen as analogous to arguing that the claim covers only non-working embodiments. The essence of the appellant's arguments pertains thus to a ground for opposition which is not in the proceedings (i.e. Article 100(b) EPC), rather than to the ground of lack of inventive step.

26. Concerning the appellant's interpretation of G 2/88: the particular statements of the Enlarged Board relied upon by the appellant do not support its contention either (see above 15., option i). The final statement of Reasons 9 in G 2/88, "for example that the compound actually achieves the particular effect" or the similar statement in the third paragraph of Reasons 9.1, "that the named compounds, when used in accordance with the described means of realisation, in fact achieve the effect (i.e. perform the function) of...", are made in the context of Article 69 (1) EPC and its Protocol. This Article and its Protocol provide a guide to the manner in which the technical features of the claim are to be interpreted for the purpose of the determination

of the extent of protection (Reasons 4, second paragraph, *ibid*). It is indeed in this very context that the Enlarged Board explains in the passages cited by the appellant, read in their entirety, the consequence, and not a pre-requisite, of a proper construction of a claim directed to the use of a known compound based on a new technical effect, namely that such claim implicitly includes the new effect as a functional technical feature.

This consequence is also expressed by the Enlarged Board of Appeal in its reply to the third question in Reasons 10.3 by the adverb "then" (see also above under Reasons 22.). A construction of that sentence cited by the appellant, which presupposes the actual attaining of the claimed technical effect as being a pre-requisite for interpreting the claimed new technical effect as a functional feature, collides with the straightforward and common meaning of its words.

To make it clear, the fact that Article 69(1) EPC and its Protocol recommend an appropriate consideration of the description for the purpose of determination of the extent of protection does not imply the assessment of the content of the description as to the question whether it sufficiently describes the features defined in the claim. Rather, the description is taken into account to avoid too much emphasis being put on the literal wording of the claims when considered in isolation from the remainder of the text of the patent (see Reasons 4, third paragraph of G 2/88).

27. Also the argument of the appellant, that the claimed purpose constituted only "mental novelty", due to an allegedly unproven achievement of the effect and the implausible explanations given for its cause in

paragraphs 27 to 29 of the patent, is not persuasive. The feature "adhesion enhancer", upon proper construction of the claim according to the manner indicated in G 2/88, is based on a technical effect, irrespective of whether its actual achievement could be seen to be proven or not by the information derivable from the patent when considered by a skilled person. This would possibly have been a consideration under the opposition ground of Article 100(b) EPC in this case (which, however, is not part of these proceedings).

28. The case law referred by the appellant also does not contradict the Board's conclusions.
- 28.1 None of the decisions cited by the appellant, notably T 1329/04, T 184/16, T 488/16, T 1322/17, refer to the considerations made in G 2/88, neither implicitly nor explicitly. The Board therefore is not convinced by the appellant's argument that, in particular, T 488/16 would constitute a further development of the principles developed in G 2/88 in regard to the required details in the description for considering the new technical effect to be "described in the patent".
- 28.2 Moreover, these decisions are not based on facts corresponding to those of the present case.
- 28.2.1 The respective claims underlying the decisions T 1329/04, T 488/16 do not relate to the use of a known compound for which a new technical effect is defined explicitly in the claim. Instead, those claims are directed to a substance or composition without defining a new technical effect in the claim (see T 1329/04, see Summary of Facts & Submissions I and Reasons 5, "[a] polynucleotide encoding a polypeptide..."; T 488/16, see Summary of Facts & Submissions V and Reasons 4.3,

"[T]he compound of formula..."). Novelty had therefore to be established on the basis of structural differences, rather than on the basis of a limiting functional feature as in the present case.

Reasons 4.9, 4.10, 4.14 and 4.15 of T 488/16, specifically referred to by the appellant, belong to that Board's considerations for deciding on the question of whether post-published evidence could be taken into account as evidence for a technical effect allegedly achieved by the claimed compound according to the description of the patent, namely to act as a "PTK inhibitor", see Reasons 4.1. They relate, for example, to the required extent of description for rendering the alleged effect at least plausible or to the burden of proof lying with each party. The Board decided that the technical effect was not made plausible at the effective date of the patent in suit. The post-published documents were thus the first disclosure going beyond speculation. As a consequence, the post-published documents could not be taken into account. There is no indication in the passages referred to by the appellant, even taken in their entirety, that these considerations should be applied when the question to be decided was whether a new technical effect defined in a claim directed to the use of a known compound for such new purpose constituted a limiting functional feature of the claim.

- 28.2.2 Irrespective of the fact that the appellant did not refer to any specific passages of the decisions T 184/16 and T 1322/17, the Board also cannot find anything in the Reasons of these decisions which would change its conclusions set out above.

Both decisions are based at least partially on claims directed to compounds defining a second medical use (T 184/16, see Summary of Facts and Submissions IV, "compound ... for use in treating or delaying the progression or onset of [followed by a list of 17 diseases]; T 1322/17, see Summary of Facts and Submissions II, "[compound] ... for use in the prevention or treatment of osteoporosis [or for use as a medicament] ... and ... is administered as a single dose"), albeit not even referred to by the appellant. In some aspects a second medical use claim can indeed be considered analogous to a use claim as considered in the present case. The therapeutic effect defined in a second medical use claim represents a limiting functional feature for the known compound (e.g. T 1322/17, Reasons 4.1).

However, T 184/16 is factually different from the present case in that the claimed compound underlying the claimed use is not a known compound, Reasons 6. Considerations similar to those underlying G 2/88 and the present case did not arise.

Furthermore, it was contested that the therapeutic effect in regard to the diseases defined in claim 12 underlying the latter decision was obtained by the claimed compound based on an alleged lack of evidence in the application for the mechanism or effect underlying the therapeutic effect (Reasons 2.1 of T 184/16). In fact, all the diseases were directly or indirectly linked to diabetes. The mechanism underlying the treatment of those diseases, and thus obtaining the claimed therapeutic effect, relied on the inhibition of a particular sodium-dependent glucose transporter ("SGLT") by the claimed compound (see Reasons 2). Its SGLT inhibitory effect was not defined in the claim,

but mentioned in the description. So far, the summarised facts bear similarity to the facts underlying the present case, in which the purported causes or mechanisms (enhanced interface affinity, changes in polar interaction) of the adhesion enhancing effect of the claimed compounds are also only cited in the description (par. 27 of the present patent in suit). The link between the claimed therapeutic effect and the underlying mechanism, the SGLT-inhibitory effect, was also not contested by the appellant in T 184/16 (Reasons 2). All considerations in T 184/16 concerning the plausibility of the contested particular SGLT inhibitory effect of the claimed compounds, i.e. the questions of whether there was sufficient information in the patent or whether post-published evidence could be taken into account, were addressed in regard to the opposition ground of insufficiency of disclosure, Article 100(b) EPC. The Board concluded that the mechanism underlying the claimed therapeutic effect was sufficiently disclosed (Reasons 2.13). However, no information can be derived from the considerations in T 184/16 that, in case that ground for opposition had not been raised (i.e. as in the present case), the therapeutic effects defined in the claim would then simply have to be ignored if doubts were raised as to their plausibility.

As mentioned earlier, T 1322/17 is based on claims directed to a second medical use of a known medicament or compound ("ibandronic acid or a pharmaceutically acceptable salt thereof") for prevention and treatment of osteoporosis. The claimed subject-matter was distinguished from the prior art by a particular dosage regime. In that case, the Board had to decide whether a single dose of a considerably higher amount, 150 mg compared to known daily doses of 2.5 mg and 5 mg, lead

to an unexpected effect in the prevention and treatment of osteoporosis. The respondent-proprietor, relying on the description of the patent and on post-published evidence, argued that a fracture reduction benefit was obtained by this dosage regime (Reasons 4.4). The Board finally concluded that the description did not support that effect, with the result that it was not taken into account in the formulation of the technical problem (Reasons 4.4.6, 4.4.7, 4.5). It follows that also this decision is based on a different factual situation than the present case.

- 28.3 The cited decisions therefore do not support the appellant's contention that the new technical effect defined in the claims could be ignored when examining the claimed compound for inventive step.

Other case law cited by the appellant in its written submissions addresses essentially questions concerning sufficiency of disclosure or burden of proof and are not in any way relevant to the issues to be decided here.

- 28.4 The Board agrees with the appellant insofar, as also repeatedly confirmed in the decisions cited by the appellant, that it is generally required that sufficient evidence is provided in the patent for a technical effect relied upon, be it that the effect is defined in the claim or that it is otherwise only derivable from the description. However the perceived deficiencies in this regard are attackable based on the separate opposition grounds of sufficiency of disclosure in the former case or inventive step in the latter. Since in the present appeal the Board is presented with the first scenario, and since the corresponding objection was not a ground for opposition

in the proceedings, the appellant's perceived unsatisfactory consequence of a patent being maintained which, in the appellant's view, potentially might not comply with the well accepted requirement mentioned above, cannot be addressed in this case merely by the appellant arguing the same point under the ground of lack of inventive step. The Board has no power to examine the corresponding opposition ground. In G 10/91 (Reasons 18), it is also noted that such an objection could still be made the subject of national proceedings.

29. To conclude on the opposition ground of lack of inventive step, Article 100(a) in combination with 56 EPC: the new purpose "adhesion enhancer" claimed for the use of the specific melamine derivatives according to claim 1 has to be taken into account as a limiting technical functional feature (Reasons 22. above). Therefore this functional feature cannot be ignored when examining inventive step, as it was (incorrectly) submitted by the appellant as its core argument for its objections under Article 56 EPC, albeit explicitly stated but only in the context of an attack based on D1 as the closest prior art (see point 24 of the appeal grounds), and analogously argued in its attack based on D7 as the closest prior art (see point 27 of the appeal grounds).

Since the appellant essentially denied the presence of such effect, it did not formulate a specific objective technical problem based on the established distinguishing features, i.e. the specific melamine derivatives and their defined effect as an adhesion enhancer in a polymer jacket covering an elongated metal tension member. The Board considers that an objective technical problem might be to provide

appropriate compounds with a new use which is suitable for application in a polymer jacket covering an elongated metal tension member.

The distinguishing feature, in particular the adhesion enhancer effect of the known specific melamine derivatives, neither belongs to common general knowledge nor is it disclosed in any of the documents cited by the appellant, in particular D8, D10, D17, D18, D20, D21 or D23. This was even acknowledged by the appellant. The subject-matter of claim 1 is thus not rendered obvious by the available prior art and therefore involves an inventive step.

30. Asked at the end of the oral proceedings before the Board whether there were any other objections, the appellant referred generally to its written submissions, nevertheless confirming that it did not rely on any of its submissions in respect of A1 to A10 (against which objections of possible exclusion/non-admittance had been raised) with regard to the ground for opposition under Article 100(a) and 56 EPC.

Concerning the written submissions, in its reply to the appeal grounds, the respondent had objected to the admittance into the proceedings of the appellant's inventive step objections based on D1 as the closest prior art. In its communication under Article 15(1) RPBA 2020 the Board also questioned whether there were any reasons why the newly formulated objections on appeal should not be held inadmissible under Article 12(4) RPBA 2007 (see point 10), noting that there appeared to be no reason why these had not been made earlier. The appellant did not submit any comment in reply, neither in writing nor orally, on the Board's preliminary opinion in this respect. In particular, the

appellant did not contest that the objections based on D1 as the closest prior art were not the subject of the impugned decision, nor did it submit any justification for why these objections could not have been submitted earlier. The Board therefore sees no reason to deviate from the intention expressed in its preliminary opinion to hold inadmissible the objections based on D1 as the closest prior art under Article 12(4) RPBA 2007.

No other objections under Article 56 EPC were raised in the written appeal procedure.

31. The ground for opposition under Article 100(a) in combination with 56 EPC therefore does not prejudice maintenance of the patent as granted.

There are also no other grounds for opposition which were validly raised or pursued in the appeal proceedings. More precisely, the grounds for opposition under Article 100(b) EPC as well as under Article 100(a) in combination with 57 EPC were withdrawn in the oral proceedings before the Board (see the minutes of those oral proceedings, page 2/4), and the ground under Article 100(c) EPC was not pursued in the appeal proceedings.

Referral of a question to the Enlarged Board of Appeal

32. Pursuant to Article 112(1) (a) EPC, in order to ensure uniform application of the law, or if a point of law of fundamental importance arises, the Board of Appeal shall, during proceedings on a case, following a request from a party to the appeal, refer any question to the Enlarged Board of Appeal if it considers that a decision is required for the above purposes.

33. The appellant submitted a question to be referred to the Enlarged Board of Appeal, drafted in German and reproduced above in IX., which the Board translates into the language of proceedings as follows:

"Is G 2/88 to be interpreted in the sense that the technical effect described in the patent actually occurs and must the achievement of this technical effect be plausibly described in the application documents as originally filed?"

34. The Board decided to reject the appellant's request to refer this question to the Enlarged Board for the following reasons.

34.1 No diverging case law on this issue has been cited by the appellant. As set out above (see Reasons 28.), the case law referred to is based on different facts and thus not divergent. Therefore the Board cannot see that the law would not be applied uniformly.

34.2 Moreover, the question in this case addresses a very specific situation which the Board finds is unlikely to arise in many cases and therefore does not address a point of law of fundamental importance. In fact, the question is based on the doubt that the technical effect defined in the claim might not actually be achieved and that the information in the patent might not be sufficient to support the obtaining of the effect. However, these issues are essentially a matter to be dealt under the opposition ground of Article 100(b) EPC. This ground had not been raised in the opposition directed against the patent in suit nor introduced by the opposition division of its own motion. This situation is thus considered somewhat exceptional and not something which would be expected

to occur in a substantial number of opposition-appeal cases.

34.3 Moreover, the present Board is competent to interpret the decision G 2/88 for the purposes of the decision to be taken in the present case, in particular in as far as the first part of the question is concerned (extent of description of the effect; see above Reasons 12-22). The second part of the question is not relevant for the present decision. The subject-matter to be dealt with concerns the claims of the granted patent and an objection requiring consideration of the content of the application as originally filed, such as for example under the opposition ground of Article 100(c) EPC, was not raised in the appeal proceedings. Whether the effect is plausibly described, rather than merely described, is not relevant to the present decision since this concerns, in the case of an effect defined in the claim itself, the opposition ground under Article 100(b) EPC. Only where the effect is not defined in the claim, would the question then arise of whether such effect needs to be taken into account when deciding on inventive step. As extensively discussed above, these conditions do not apply to the present case.

Order

For these reasons it is decided that:

1. The appeal is dismissed.
2. The request for referral to the Enlarged Board of Appeal is refused.

The Registrar:

The Chairman:



D. Grundner

M. Harrison

Decision electronically authenticated