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**Datasheet for the decision
of 26 April 2021**

Case Number: T 2666/17 - 3.3.06

Application Number: 11710363.0

Publication Number: 2542403

IPC: B32B5/18, B32B5/20, B32B27/38,
C08J9/00, B62D29/00

Language of the proceedings: EN

Title of invention:
STRUCTURAL COMPOSITE LAMINATE

Patent Proprietor:
Zephyros Inc.

Opponent:
Sika Technology AG

Headword:
Zephyros/composite

Relevant legal provisions:
RPBA Art. 12(4)
RPBA 2020 Art. 13(2)
EPC Art. 54, 84, 83, 123, 56

Keyword:

Late-filed facts - admitted (no)
Late-filed evidence - admitted (no)
Novelty - (yes)
Claims - clarity (yes)
Sufficiency of disclosure - (yes)
Amendments - allowable (yes)
Inventive step - (yes)

Decisions cited:

T 0815/07

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 2666/17 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 26 April 2021

Appellant: Sika Technology AG
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Representative: Sika Patent Attorneys
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 October 2017
rejecting the opposition filed against European
patent No. 2542403 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: S. Arrojo
J. Hoppe

Summary of Facts and Submissions

- I. The appeal from the opponent is directed against the decision of the opposition division to reject the opposition against European patent No. 2 542 403, claim 12 thereof reading:

"1. A method of forming a composite laminate for providing sealing, baffling or reinforcement to a structure, the method comprising:

providing a reinforcement layer having a high surface tension of at least about 35 dynes/cm;

locating an epoxy-based expandable structural foam material onto the reinforcement layer to form the composite laminate wherein the surface tensions of the structural foam and reinforcement layer are within about 15 dynes/cm of one another;

wherein the high surface tensions of the reinforcement layer and structural foam provide sufficient wetting for load transfer from the structural foam to the reinforcement layer to:

i. increase the tensile strength of the composite laminate; and

ii. increase the lap shear strength of the composite laminate."

- II. With its grounds of appeal, the appellant requested to set aside the decision and to revoke the patent in its entirety. It also submitted documents D9 (declaration from Mr Obringer), D10 (an alleged public prior use consisting of D10.1 (Website "plasticportals.net"), D10.2 (press information P454/08), D10.3 (press photo 2008) and D10.4 (surface tension measurements), D11 (data-sheet "SikaReinforcer-911"), D12 (User handbook "Drop Shape Analysis DSA1") and D13 (J. Brandup et al,

"Polymer Handbook", 4th Edition, Volume 2).

- III. With a later letter, the appellant submitted additional evidence (two infrared spectra referred to as D14 by the Board) in support of the novelty objection raised with its grounds of appeal.
- IV. With its reply of 29 June 2018, the patentee (also respondent) requested to dismiss the appeal and submitted seventeen auxiliary requests as well as new documents D15 (ASTM D7490-08) and D16 (Krüss, Technical Note). It also requested that neither documents D9-D14 nor the appellant's novelty objections raised in the grounds of appeal be admitted into the proceedings.
- V. With a letter dated 5 October 2018 the respondent submitted two further test reports D17 and D18.
- VI. In its preliminary opinion, the Board informed the parties that the main and first to eleventh auxiliary request did not appear to comply with the requirements of Article 123(2) EPC and that neither the novelty objections (based on D8 and D10) nor documents D9, D10 and D14 should be admitted into the proceedings. It further indicated that auxiliary request 12 should be admitted into the proceedings.
- VII. At the oral proceedings, which took place on 26 April 2021, the patentee withdrew the main and 1st to 11th auxiliary requests and it made auxiliary request 12 to its new main request. Claim 1 thereof reads as follows:

"1. A method of forming a composite laminate for providing sealing, baffling or reinforcement to a structure, the method comprising:

providing a reinforcement layer having a surface tension of at least 35 dynes/cm;

locating an epoxy-based expandable structural foam material onto the reinforcement layer to form the composite laminate;

characterized in that

the surface tensions of the structural foam and reinforcement layer are within 15 dynes/cm of one another; wherein the surface tensions of the reinforcement layer and structural foam provide sufficient wetting for load transfer from the structural foam to the reinforcement layer to:

i. increase the tensile strength of the composite laminate; and

ii. increase the lap shear strength of the composite laminate;

and the reinforcement layer includes a carboxylic acid or amine chemical functional group and the structural foam material includes a component that forms a covalent bond with the carboxylic acid or amine functional group of the reinforcement layer upon exposure to temperatures greater than 150 °C;

wherein the structural foam is located onto the reinforcement layer by a co-extrusion process."

Before the debate was closed, the parties' requests were established to be as follows:

The **appellant (opponent)** requested that the decision under appeal be set aside and that the patent be revoked.

The **respondent (patent proprietor)** requested that the patent be maintained in amended form on the basis of auxiliary request 12 (new main request) or, as an auxiliary measure, on the basis of one of auxiliary

requests 13 to 17, all the requests having been filed with the reply to the appeal on 29 June 2018.

Reasons for the Decision

1. Auxiliary request 12 - Admittance
 - 1.1 This request is admitted into these proceedings because the request having been submitted with the proprietor's reply to the grounds of appeal, the Board considers that the proprietor had no particular reason to file this request during first instance proceedings, because already in the annex to the summons to oral proceedings, the opposition division indicated that the patent as granted appeared to satisfy the requirements of the EPC.
 - 1.2 Thus, as already indicated in its preliminary opinion, the Board sees no reason to exercise its discretion under Article 12(4) RPBA 2007 to exclude this request from the proceedings.
2. Newly filed facts and evidence - Admittance
 - 2.1 The opponent relied on documents D10.4, D12 and D13 to support its objections under Article 83 EPC. These documents have been filed to support common general knowledge, in particular to demonstrate that the values obtained for the surface tension are affected by the measuring method and the measuring conditions. Since these alleged facts are not contested by the Board (see §3.2 of the present decision), there is no need to decide on the question of admittance under Article 12(4) RPBA 2007 (the content of these documents being not relevant for the underlying decision).

2.2 At the oral proceedings, the opponent indicated that it intended to present new inventive step objections against auxiliary request 12 using documents D8 and D10 as closest prior art. It argued that these objections had not been submitted earlier because it had thought it would be possible to do so at the oral proceedings.

2.2.1 The Board notes that although auxiliary request 12 was submitted already with the reply to the appeal, the opponent did neither react directly to the filing of this request nor even after the Board pointed out (§4.1 of the preliminary opinion) that there were no objections on file against the auxiliary requests, and that, if the opinion not to admit the newly submitted documents were confirmed, there would be no patentability objection on file.

2.2.2 The Board considers that, even though the submission of auxiliary request 12 could have justified the admittance of further objections if they were filed as an immediate reaction thereto, in the present case these cannot be admitted for the following reasons:

- The new facts cannot be admitted on the basis that they would represent a reaction to the filing of the new request, because, in view of point 2.2.1 above, it is apparent that the opponent had several opportunities to present objections against auxiliary request 12 earlier in the proceedings, and that there was no justification for waiting until the oral proceedings to do so;

- Articles 13(1) and (2) RPBA 2020 unequivocally point out that late amendments to the appeal case should only be admitted when these are not detrimental for the procedural economy and when exceptional circumstance

apply. In this respect, the submission of objections at such late stage would not only be detrimental for procedural economy, but cannot be justified on the erroneous assumption that it would be possible to react at such late stage, as this does not represent an exceptional circumstance under Article 13(2) RPBA 2020.

2.2.3 The Board thus exercised its discretion not to admit the late filed inventive step objections against auxiliary request 12 starting from D8 or D10 as closest prior art, so that they are not to be taken into account.

3. Auxiliary request 12 - Article 83 EPC

In the board's view, the invention as defined in the claims of this request meets the requirement of sufficiency of disclosure pursuant to Article 83 EPC for the following reasons:

3.1 The appellant argued that the patent did not indicate how to measure the surface tension of the materials, despite the fact that this parameter was defined several times in claim 1 and was clearly essential for the invention. It was well known that the surface tension values were significantly affected by the measuring method and the temperature, a conclusion which was supported by documents D10.4 (table 4), D12 (pages 150-160) and D13 (page VI/531). Thus, a skilled person trying to reproduce the invention would not be able to find the appropriate materials, i.e. products having specific surface tension values as defined in claim 1. The examples did not help solving this problem, because no reference was made to the surface tension of the selected materials or to how this should

be measured. The invention was therefore insufficiently disclosed.

3.2 The Board disagrees with the above argumentation for the following reasons:

According to established jurisprudence (see Case Law of the Board of Appeal, 9th ed., II.C.5.5 and T 815/07), the deficiencies in the definition of a parameter, such as the surface tension in the present case, only lead to a problem of sufficiency of disclosure if this parameter is so ill-defined that a skilled person is not able, using its general knowledge, to identify without undue burden the technical measures necessary to solve the underlying technical problem.

In the present case, it is noted that the surface tension is a well-known parameter which can be measured using known methods. Thus, carrying out the invention merely requires using any one of these methods to select materials having the defined surface tensions in order to promote the adhesion of the layers during the co-extrusion process.

It is not contested that the measuring method and conditions (such as temperature or aggregation state of the materials) would lead to different results (there is thus no need to additionally rely on D10.4, D12 and D13) and that the invention does not specify how to conduct these measurements. However, this would not prevent the skilled person from reproducing the invention, but would simply raise doubts as to whether certain embodiments at the edge of the scope of protection fall within the forbidden area or not. In this respect, the more recent decisions of the Boards have however established (see Case Law of the Board of

Appeal, 9th ed., II.C.6.6.4) that the definition of the "forbidden area" of the claims does not concern Article 83 EPC but Article 84 EPC.

3.3 It follows from the above considerations that the Board could not establish any gap of information or lack of guidance in the patent in suit which could lead to the conclusion that the claimed invention was not sufficiently disclosed.

3.4 In view of this conclusion there is no need to decide on the admittance of documents D15 and D16, as these were filed by the respondent in support of its argumentation under Article 83 EPC.

4. Auxiliary request 12 - Article 84 EPC

4.1 Although no objection was raised against this request, the Board notes that the only aspect going beyond the combination of claims as granted is the definition of the load transfer effects as defined in claim 1 as filed. The Board considers that the scope of protection provided by these effects is clarified by the definition of specific technical features, in particular the co-extrusion step of layers of materials having the defined surface tensions and/or the definition of a reinforcement layer with functional groups as defined in claim 1. It is furthermore clear that the defined effects merely imply that the tensile strength and the lap shear of the resulting composite should be higher than those of the original materials.

4.2 The subject-matter of the claims is thus considered to be clear and the requirements of Article 84 EPC are thus complied with.

5. Auxiliary request 12 - Article 123 EPC

- 5.1 Claim 1 at issue is based on a combination of claims 1, 3, 4 and 11 as filed, wherein the terms "about" (in "about 35 dynes/cm") and "high" (in "high surface tension") have been deleted. These omissions do not change the original subject-matter, because the surface tension is anyway defined in the claim ("at least 35 dynes/cm") and the term "about" did not provide any meaningful limitation beyond adding a certain degree of uncertainty.

Dependent claims 2-6 and 8 at issue are respectively based on claims 2, 4, 6, 7, 8 and 12 as filed, and claim 7 at issue is based on claim 18 or paragraph 6 as filed.

The requirements of Article 123(2) EPC are thus met.

- 5.2 The subject-matter of the claims having been restricted with respect to that of the claims as granted, the requirements of Article 123(3) EPC are thus met either.

6. Auxiliary request 12 - Patentability

- 6.1 The Board notes that at the appeal proceedings, the opponent-appellant has only contested the opposition division's decision on patentability by submitting new documents and objections, which - as explained above - were not admitted by the Board under Article 13(2) RPBA 2020. There is thus no patentability objection on file against auxiliary request 12.

In the absence of such objection and since the opposition division concluded that a broader version of the claims (namely the claims as granted) met the

requirements of patentability of the EPC (see §3 and §4 of the decision) in view of the cited prior art, no further assessment under Articles 54 and 56 EPC needs to be made ex officio.

- 6.2 There is also no need to decide on the admittance of document D14, as this document has not been cited to formulate objections against auxiliary request 12.
- 6.3 Furthermore, in view of the above conclusions, there is no need to decide on the admittance of documents D17 and D18, as these were filed by the respondent in support of its argumentation under Article 56 EPC.
7. The Board has therefore concluded that the claims of auxiliary request 12 meet the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form based on the claims of auxiliary request 12 filed with letter of 29 June 2018 and a description to be adapted.

The Registrar:

The Chairman:



A. Pinna

J.-M. Schwaller

Decision electronically authenticated