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**Datasheet for the decision
of 18 June 2015**

Case Number: T 1812/13 - 3.2.05

Application Number: 03076235.5

Publication Number: 1356911

IPC: B29C44/18, B60R13/08, B62D29/00

Language of the proceedings: EN

Title of invention:
Method for reinforcement of structural members

Patent Proprietor:
Zephyros Inc.

Opponent:
Sika Technology AG

Headword:

Relevant legal provisions:
EPC 1973 Art. 54(2)

Keyword:
Novelty - (no)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 1812/13 - 3.2.05

**D E C I S I O N
of Technical Board of Appeal 3.2.05
of 18 June 2015**

Appellant: Sika Technology AG
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 20 June 2013 rejecting the opposition filed against European patent No. 1356911 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman M. Poock
Members: P. Lanz
G. Weiss

Summary of Facts and Submissions

- I. The appeal by the opponent is against the opposition division's decision rejecting the opposition against patent EP-B-1 356 911.
- II. The opposition was based on the grounds for opposition according to Article 100(a) EPC 1973 of lack of novelty and lack of inventive step.
- III. Oral proceedings were held before the board of appeal on 18 June 2015.
- IV. The appellant requests that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requests that the appeal be dismissed.

- V. The documents referred to in the appeal proceedings include:

E4: US 6,321,793.

- VI. Independent claim 1 of the contested patent reads as follows:

"A method of reinforcing at least a portion of a structure member of an automotive or aerospace vehicle, the method comprising:

providing a structural member (16):

providing at least one chamber (12) along an inner portion of the structural member

once the chamber is in place within the structural

member an expandable material (14) comprising a

polymer-based liquid, solid or semi-solid material is

placed, filled, extruded or pumped into the chamber through an access hole or port extending through the exterior portion of the chamber allowing the expandable material to expand and fill the chamber characterised in that the chamber is rigid and box like and having an interior portion with a defined volume and is shaped to conform with the geometric dimensions of the inner portion of the structural member (16)".

VII. The arguments presented by the appellant are essentially as follows:

The embodiment of Figure 6 of document E4 disclosed all the features of independent claim 1. Reference was made to Figure 2 of the patent in suit, which depicted the box like chamber according to the characterising portion of claim 1. It was observed that this drawing was identical to Figure 6 of document E4. Even if the description of document E4 explicitly referred to the chamber as a "*flexible barrier member*", in view of these identical drawings the chamber of Figure 6 had to be considered as box like and rigid within the meaning of the contested patent, in particular in view of it being suitable for retaining the reinforcing material within the chamber. Additionally, the controversial terms "flexible" and "rigid" were both of a relative nature and did not necessarily mutually exclude each other. The specification of the patent in suit did not contain any explicit definition of how the feature "rigid and box like" had to be understood. Thus, the respondent's submission that the claimed chamber was meant to be an inflexible, self-standing container was without a basis in the patent. It was noted that the last sentence of paragraph [0042] of the contested patent implied that the chamber, despite its rigidity, had the flexibility necessary for it to conform to the

surface of the structural member. Consequently, the characterisation of the chamber as rigid and box like was not suitable to establish novelty of the subject-matter claimed over the embodiment of Figure 6 of document E4.

VIII. The respondent's submissions can be summarised as follows:

The subject-matter of claim 1 differed from document E4 in that the claimed chamber was specified as being rigid and box like, i.e. as an inflexible and self-standing container. This was not in conflict with the last sentence of paragraph [0042] of the patent specification, according to which it was the expanding material 14 (and not the chamber 12) which conformed to the structural member 16. By contrast, the prior art chamber of the embodiment of Figure 6 in document E4 was clearly presented as a bladder system (cf. E4, column 1, line 36 and column 2, line 46), and its material thus had to be expandable. More specifically, the flexible barrier member 12 of Figure 6 of document E4 comprised single sheets of a flexible material (E4, column 3, line 26). Hence, taking into account the description of document E4, the flexible barrier member of Figure 6 could not anticipate the rigid and box like chamber of claim 1, even if Figure 2 of the patent was identical to Figure 6 of document E4. In that respect, it had to be noted that the contested claim was directed to a method which was different from the prior art method of document E4. However, both methods could result in the same product, which was reproduced in Figure 2 of the patent and in Figure 6 of document E4.

Reasons for the Decision

1. Novelty

1.1 Both parties are in agreement that the embodiment of Figure 6 of document E4 discloses the preamble of independent claim 1. However, it remains controversial whether this piece of prior art in combination also divulges a rigid and box like chamber as required in the characterising portion of the claim. The respondent essentially submits that this was not the case since the chamber shown in Figure 6 of document E4 was explicitly presented as a flexible sheet in the corresponding part of the description. It could thus not anticipate the rigid and box like, i.e. inflexible and self-standing, container.

1.2 The board first notes that the representation of the claimed box like chamber in Figure 2 of the patent is identical to the prior art chamber shown in Figure 6 of document E4. Consequently, the latter must equally be considered as being box like within the meaning of the patent in suit. The issue of novelty of the subject-matter of claim 1 thus hinges on whether the skilled person would understand the barrier member 12 in Figure 6 of document E4 as being rigid.

1.3 As a general observation, "flexible" and "rigid" are both relative terms which depend on the particular circumstances being considered, which may include the part design, the mechanical load or the temperature applied. Moreover, they are not necessarily mutually exclusive. Thus, the wording chosen in the contested claim does not rule out that the chamber, despite being rigid, possesses at least some degree of flexibility.

This possibility is in fact supported by the last sentence of paragraph [0042] of the patent specification:

"In this embodiment, the material 14 is pumped directly into the chamber 12, causing it to expand and conform to the dimensions of the inner portion of the structural member 16 as shown in Figure 1."

Irrespective of whether the wording "causing it" in the above statement refers to the chamber itself or to the material within the chamber, according to both readings the expansion causes the chamber to conform to the inner portion of the structural member. In the judgement of the board, the rigid chamber of the claim must therefore have at least some flexibility. By contrast, the respondent's interpretation of the claimed rigid and box like chamber as an inflexible, self-standing container finds no support in the disclosure of the patent in suit. It is thus not adopted by the board.

- 1.4 Turning to the prior art document E4, it is a general legal rule for the interpretation of any document, and in particular of a patent or patent application, that, in order to determine its true meaning and, hence, its content and disclosure, no part of such a document should be construed in isolation from the remainder of it. On the contrary, each part of such a document has to be construed in the context of the content of the document as a whole. Thus, even though a part of a document appears to have a particular meaning when interpreted literally and in isolation from the remainder of the document, the true meaning of that part of the document could be different having regard to the remainder of the document (cf. Case Law of the

Boards of Appeal of the European Patent Office, 7th edition, 2013, I.C.3.1).

When applying this principle to document E4, the skilled person would note that in the detailed description the controversial chamber is presented as a bladder system. In particular, its specific embodiment of Figure 6 comprises end members 18a and 18b, which are described as single sheets of a flexible material (E4, column 1, line 36; column 2, line 46 and column 3, line 26). Hence, the description of document E4 indeed indicates that the chamber has a certain flexibility. However, the skilled reader would also take into account the further information about the chamber disclosed in Figure 6. This drawing illustrates the chamber when filled with reinforcing material. It leaves no doubt that the end members 18a and 18b, although being of a generally flexible material, must have at least the rigidity required to retain the reinforcing material 14 within the chamber, as explicitly stipulated in claim 1 of document E4. This is especially true if the filling is done under pressure and/or an expanding filler is used (E4, column 3, lines 8 to 17 and column 4, lines 33 to 41). Consequently, document E4, on the basis of its teaching as a whole and the board's understanding of the relative term "rigid" in the contested patent as set out above, clearly and unambiguously discloses the chamber to be of a certain rigidity.

- 1.5 For these reasons, the board concludes that the chamber of Figure 6 of document E4 is both rigid and box like. It is not contentious that this prior art also discloses the further elements of the contested claim 1, the subject-matter of which is, hence, not new, Article 54(1) and (2) EPC 1973.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated