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Datasheet for the decision of 14 November 2013

Case Number: T 1580/11 - 3.3.09

Application Number: 03760492.3

Publication Number: 1516027

IPC: C09J5/02

Language of the proceedings: EN

Title of invention:
PROCESS FOR APPLYING AN ADHESION PRIMER TO A WINDOW

Patent Proprietor:
Dow Global Technologies LLC

Opponent:
Sika Technology AG

Headword:

Relevant legal provisions:
EPC Art. 54, 56, 100(a)

Keyword:
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

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Case Number: T 1580/11 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 14 November 2013

Appellant: (Opponent)	Sika Technology AG Zugerstrasse 50 6340 Baar (CH)
Representative:	Sika Patent Attorneys C/o Sika Technology AG Tüffenwies 16 Postfach 8048 Zürich (CH)
Respondent: (Patent Proprietor)	Dow Global Technologies LLC 2040 Dow Center Midland, MI 48674 (US)
Representative:	Burford, Anthony Frederick Beck Greener Fulwood House 12 Fulwood Place London WC1V 6HR (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 May 2011 rejecting the opposition filed against European patent No. 1516027 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman: W. Sieber
Members: N. Perakis
R. Menapace

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 1 516 027 to Dow Global Technologies Inc. was published on 23 July 2008 (Bulletin 2008/30).

Claims 1 and 2 read as follows:

"1. A process for applying an adhesion primer (15) to a window (10), characterized by the steps of: (a) directing light (11) onto the window (10) to illuminate a portion (13) of the window (10); (b) applying an adhesion primer (15) along the illuminated portion of the window (10)."

"2. The process of Claim 1, wherein step (a) comprises repeatedly scanning a beam of light (11) onto the window (10) at a repetition rate to form an apparent luminous line (13) on the window (10)."

II. An opposition was filed against the patent by Sika Technology AG requesting the revocation of the patent on the grounds of novelty and inventive step (Article 100(a) EPC) and added subject matter (Article 100(c) EPC) - the latter concerning only the subject-matter of dependent claim 2.

III. The documents cited in the opposition proceedings included the following:

D1': JP 62-105715 A; and
D1 : translation of D1' into English.

IV. By a decision announced orally on 13 April 2011 and issued in writing on 3 May 2011, the opposition division rejected the opposition.

V. The opponent (in the following the appellant) filed an appeal against the decision of the opposition division on 11 July 2011 and paid the fee on the same day. The statement setting out the grounds of appeal was filed on 2 September 2011 along with the following additional documents:

D8': JP 1 244 992 A together with a summary of D8'from Espacenet;
D8 : translation of D8' into English;
D9 : US 3 881 043 A; and
D10: WO 01/82634 A2.

The appellant reiterated its objections under Articles 100(a) and 100(c) EPC raised during the opposition procedure.

VI. The patent proprietor (in the following the respondent) filed observations on the appeal with letter of 29 December 2011 along with twelve auxiliary requests.

VII. Oral proceedings were held before the board on 14 November 2013. During the oral proceedings the appellant withdrew the objection under Article 100(c) EPC.

VIII. The relevant arguments put forward by the appellant in its written submissions and at the oral proceedings may be summarised as follows:

- The opposition division interpreted the process of claim 1 too narrowly, causing features to be read into the process which were not included in the claim itself.

- On the basis of the interpretation adopted by the appellant, the claimed process lacked novelty in view of D1, D8 and D9.

- Even if novelty were acknowledged, the process of claim 1 did not involve an inventive step in view of the obvious combination of D1 with D10 or D9 with D10.

IX. The relevant arguments put forward by the respondent in its written submissions and at the oral proceedings may be summarised as follows:

- The opposition division's interpretation of claim 1 was correct. First, this interpretation did not require features to be read into the claim. Second, the appellant's construction of the claim was evidently based on reading the claim in isolation, rather than reading the claim through the eyes of the skilled person.

- On the basis of that interpretation the process of claim 1 was novel over D1, D8 and D9.

- Furthermore, the process of claim 1 involved an inventive step since it was not obvious from the cited prior art.

X. The appellant requested that the appealed decision be set aside and European patent No 1 516 027 be revoked.

XI. The respondent requested that the appeal be dismissed or that the patent be maintained on the basis of one of auxiliary requests 1-12 filed with the letter dated 29 December 2011.

Reasons for the Decision

1. The appeal is admissible.

2. Interpretation of claim 1

2.1 The method of claim 1 is characterized by the following two steps:

- (a) directing light onto the window to illuminate a portion of that window;

- (b) applying an adhesion primer along the illuminated portion of the window.

2.2 In its decision (see item 2.3) the opposition division considered that the wording of claim 1 aimed unambiguously to a process in which the adhesion primer was applied while the portion of the window was illuminated. The reason was that the core of the patent in suit was to project a luminous portion or line onto a window to make apparent the portion of the window to be treated with the primer. Accordingly, the illumination of the window represented a guide for the application of the primer. A process, in which a portion of the window was illuminated, then the illumination was switched off and then the primer was applied, would not make sense, since the guiding function of the illumination would be lost.

2.3 The board agrees with the opposition division and considers that the skilled person reading claim 1 in the context of the opposed patent would immediately understand that adhesion primer is applied to the illuminated portion of the window while that portion is illuminated, which means that illumination is used as a

guide for the application of the adhesion primer. In this context reference is made to paragraph [0004] of the patent in suit which recognises the need for such a guide and states that

"It would be an advance in the art of applying an adhesion primer to the enamel band of such a window if a process were developed that indicated the area to be primed ...[emphasis added]".

Paragraph [0012] discloses the required means in order to put into practice such a guide and states that

"... any suitable system can be used to direct light onto the glass object to illuminate and make apparent the portion of the glass object to be treated [emphasis added]".

2.4 The appellant argued, however, that such an interpretation was too narrow and that the opposition division had read features into the claim which were not included in the claim itself, namely:

- the time at which illuminating a portion of the window and applying the primer are carried out (only "simultaneously" has been retained by the opposition division although "consequently" or "delayed" were further possible interpretations) and
- the local overlap of the light on a portion of the window with the adhesion primer along this portion of the window (which was not a requirement of the claimed process).

2.5 The board does not agree with with the appellant for the following reasons.

2.5.1 First, the the opposition division's interpretation of claim 1 does not require features to be read into the claim. It simply requires the word "illuminated" to take its straightforward adjectival meaning so that "illuminated portion" means "portion to which light is applied". Therefore, the primer can only be applied while the respective window portion is illuminated. The appellant's suggestion that "illuminated" means also a portion to which light has previously (but not any more) been applied is a less natural meaning.

2.5.2 Second, the appellant's construction of the claim is based on reading the claim wording in isolation rather than reading the claim through the eyes of the skilled person in the context of the patent as a whole. As the opposition division correctly pointed out, applying primer to a previously illuminated portion would make no technical sense, since there would be nothing to serve as a guide for primer application. Even more, previous illumination has no technical effect at all on the later application of primer.

In this context, the appellant also argued that in figure 2 the shadow of the applicator 14 would prevent light from laser 12 from reaching the window at the point of application. However, the board considers that this makes no difference to the interpretation of claim 1. The skilled person reading the patent to make technical sense of it, would understand clearly that the wording "applying an adhesion primer along the illuminated portion of the window" does not exclude the situation where the primer applicator casts some shade to the illuminated portion, which is used as a guide for the applicator. Thus in view of figure 2, he would not consider that the "illuminated portion" could be a

"previously" illuminated portion, or that use of an illuminated portion as a guide would not be required by claim 1.

2.5.3 Finally, claim 1 requires "applying an adhesion primer **along** the illuminated portion of the window [emphasis added]". The board in agreement with the respondent considers that this requirement means that the application of an adhesion primer **follows** the illumination which is used as a guide for that application. This is in line with paragraph [0009] of the patent in suit which states that "the applicator 14 can be manually manipulated or the applicator 14 can be manipulated by a robot programmed **to follow** the line 13" [emphasis added].

3. Novelty

3.1 In the appeal proceedings the appellant considered that the process of claim 1 lacked novelty in view of the disclosure of D1, D8 and D9. As pointed out by the respondent these documents disclose to apply a primer (D1, D8) or a coupling agent (D9) to a window and to check that the primer has been properly applied (D1, D8). However, they do not disclose to use illumination as a guide for applying the primer or the coupling agent as required by claim 1 of the opposed patent.

3.2 D1 relates to an improvement of a windshield glass having a black coating layer consisting of ceramics at the periphery of the windshield glass. D1 discloses the use of physical gaps ("non-forming part") in the ceramic coating in order to check the application of a primer to the ceramic coating. Only after the application of a primer the coated window is illuminated and the transmission of light through a gap

("non-forming part") indicates whether or not primer covers the gap properly.

D1 does not disclose how the primer is applied. Thus, it is not directly and unambiguously derivable from D1 that primer application takes place during illumination of the glass with a photoelectric tube or otherwise. The light transmission is used to check that the primer has been applied and not to guide the application of the primer. It is thus concluded that claim 1 is novel over the disclosure of D1.

3.3 The teaching of D8 is similar to that of D1. It teaches an alternative approach to ensure that an adequate primer layer is provided for good adhesion. Again, illumination is used to check for even coating of primer on ceramic-coated window glass.

As can be seen from figure 2 of D8' primer 42 is applied by brush 38. The check for even primer application is done by comparing the light transmission through the glass before primer is applied - at the first detecting means 44- and after primer is applied - at the second detecting means 46. In the first light detecting means (before primer application) light from the light projection parts 48 is directed to light sensing portion 50, as indicated by arrows. The same is done after primer application with light projection parts 52 and light sensing portion 54.

The appellant argued that light from the light projection part 48 illuminates the portion of the window to be coated with primer. However, the board cannot agree with this argument.

Focusing of the light is discussed at page 7 of D8. Although this passage is rather unclear, it is apparent that light from light projection part 48 is directed towards light sensing portion by means of "slit shape floodlighting holes". Thus, light from projection part 48 would not reach brush 38.

In summary, D8 does not disclose applying an adhesion primer along the illuminated portion of the window. Consequently claim 1 is novel also with regard to the disclosure of D8.

3.4 D9 relates to lamination of glass and polyurethane sheets to form safety windshields (abstract). Thus, D9 is in a somewhat different technical area from the present invention, which relates to application of adhesion primer to an already-formed window. In the lamination step a pattern of an adhesion promoting coupling agent is disposed at the interface between said glass and said polyurethane. Said pattern extends around the marginal edge portion of said interface to provide said portion with a strong adhesive bond between said glass and said polyurethane even when subjected to delamination under high humidity. Regarding the application of the adhesion promoting coupling agent, D9 discloses that it is generally applied by swabbing or brushing, the coating being allowed to dry at ambient conditions (column 19, lines 7-10).

According to a preferred embodiment, the glass sheet is covered with a thin perforated rubber sheet whose apertures are arranged in the desired pattern to form a template and the adhesion promoting coupling agent is applied in solution form by spraying the solution over the template so that the coupling agent is applied to

the glass surface in the desired dot pattern. The dot pattern composition is allowed to dry before assembling the sheets to be laminated (column 20, lines 25-42).

Therefore claim 1 differs from the disclosure of D9 in that light is directed onto the portion of the window to which primer is to be applied and that the adhesion primer is applied along the illuminated portion of the window. Consequently claim 1 is novel also in view of the disclosure of D9.

The argument of the appellant was that the spraying in D9 is performed under natural daylight or using an artificial light source, otherwise the portions to be sprayed would not be recognisable at all for the operator of the spraying device. However, even if a light source were disclosed in D9 (which is not), it would presumably not be directed to illuminate a portion of the glass sheet, but would illuminate the whole glass sheet. The fact that part of the glass sheet is covered with a rubber template does not mean that light is directed to illuminate a portion of the sheet.

4. Inventive step

4.1 The patent in suit concerns a process for applying an adhesion primer to the black enamel coating of a window, which increases the bond strength between the enamel and an adhesive moulded to the window frame (paragraphs [0001] and [0002]). D1 (or D8), which relates to the application of a primer on a window glass coating in order to provide sufficient bonding between the glass coating and the adhesive by which the glass is fixed on the window frame (page 2, second to fourth paragraphs), belongs to the same technical field

and is thus considered to represent the closest state of the art.

As mentioned above, D9 belongs to a somewhat different technical area from the present invention, since it relates to the lamination of glass and polyurethane sheets to form safety windshields, and not to the application of a primer to a window itself for mounting in the body of an automobile. Therefore D9 does not form a good starting point for an inventive step attack.

4.2 The problem underlying the patent in suit in the light of the closest prior art is the provision of an improved process for applying an adhesion primer to a window.

4.3 As a solution to this problem the patent in suit proposes the process of claim 1 characterized by steps a) and b).

Such a process is simple and effective and helps to avoid the need of reapplication of primer as in D1 (page 4, fourth full paragraph). The process allows to project indicia (such as an array of dots or other geometric shapes which correspond to indicia on the window e.g. printed on or indicated by a void in the enamel band of the window), to ensure that the window has the correct specification and is correctly located for primer application (patent, paragraph [0012]). Furthermore, the technical evidence of the patent in suit, which has not been contested by the appellant, provides the adequate proof, that the set technical problem has effectively been solved (see examples 1-3).

4.4 The person skilled in the art starting from D1 and aiming at the provision of an improved process for applying an adhesion primer to a window would not find in D1 the claimed solution. Incidentally, D1 teaches only that it is important to check that the primer layer has been formed and describes a way of carrying out this check. D1 does not discuss the primer application step in detail and it is not clear whether the primer is applied using an edge guide, a template or a printed pattern, i.e., the usual application methods in the art at the filing date of the patent in suit (patent, paragraph [0003]). D1 does not teach that a change is needed to the usual primer application step.

Furthermore, contrary to the assertions of the appellant, the light of D1 which is applied to the window before the application of primer is the light which passes through the "non-forming part" of the coating layer, this light being in the form of a beam and illuminating only a small spot of the window glass 1 at a time (figure 2, number 14). This beam of light does not correspond to the light which is necessary to illuminate a portion of the window which is to be coated with primer.

Moreover, D10 does not provide the necessary motivation either. Firstly, the skilled person would not consult D10 since it relates to a rapidly scanned laser system that accurately identifies locations on an object which is used *inter alia* in painting technology (page 1, lines 8-9 and 23-24; page 4, lines 15-26). D1 concerns the application of a primer. A primer has a different function compared to that of a paint since it is applied on a window glass coating layer in order to increase the bond strength between the coating layer

and the urethane-based adhesive (D1, page 2, paragraphs second and fourth full paragraphs; patent in suit, paragraph [0001]). Anyway, even if it was supposed that the skilled person would consult D10, he would have no reason to combine its disclosure with that of D1 since the laser projectors of D10 serve only to locate the position of mechanical templates or masks on contoured surfaces (page 24, lines 8-9) and not to improve the application of the paint. Since D10 does not disclose the use of laser projectors directly as guides for applying paint, the alleged combination with D1 would only be possible with the benefit of hindsight.

4.5 The same conclusion would be reached if D9 was considered to represent the closest prior art. D9 uses a rubber mask guide the application of the primer. Therefore the use of laser light instead of the rubber mask as a guide for the application of the primer would be a radical change of the disclosure of D9. However the skilled person finds no motivation either in this document or the rest of the cited prior art for such a change and the board considers that he would only arrive at the claimed process only in the case of an ex post facto analysis.

5. Dependent claims

Claims 2 to 7 depend directly or indirectly on claim 1 and concern specific embodiments of the claimed process. They are *mutatis mutandis* novel and involve an inventive step.

6. On the basis of the above considerations the granted claims (main request) fulfil the requirements of the EPC and are therefore allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Cañueto Carbajo W. Sieber

Decision electronically authenticated