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D E C I S I O N
of 1 August 1997

Case Number: T 0533/95 - 3.2.5

Application Number: 88104996.9

Publication Number: 0285071

IPC: B44C5/04

Language of the proceedings: EN

Title of invention:
Dry paint transfer process and product

Patentee:
Avery International Corporation

Opponent:
Rexham Industries Corporation

Headword:
-

Relevant legal provisions:
EPC Art. 54(3), (4)

Keyword:
"Novelty (yes - after amendment)

Decisions cited:
-

Catchword:
-

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Case Number: T 0533/95 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 1 August 1997

Appellant: (Proprietor of the patent)
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 13 April 1995 revoking European patent No. 0 285 071 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: W. D. Weiss
Members: A. Burkhart
C. Holtz

Summary of Facts and Submissions

I. The appellant (proprietor of the patent) lodged an appeal against the decision of the Opposition Division on the revocation of the patent No. 0 285 071.

Opposition was filed against the patent as a whole and based on Article 100(a) EPC (lack of novelty and inventive step) and Article 100(b) EPC (lack of enabling disclosure).

The Opposition Division held that the subject-matter of the independent claim 76 of the granted patent was not novel with respect to the disclosure of document D2 (EP-A-0 266 109).

The Opposition Division, however, held that the subject-matter of the independent claims 1, 20, 39, 54, 62, 69 and 72 of the granted patent was both novel and involved an inventive step with respect to the prior art cited by the opponent.

The Opposition Division also found that the patent in suit disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

II. On 21 February 1997 the board summoned the parties to oral proceedings for 1 August 1997 and annexed to the summons a communication in which it expressed its provisional opinion concerning the question of novelty of the subject-matter of the patent in suit with respect to the disclosure of document D2.

III. On 1 July 1997, i.e. one month before the scheduled date of the oral proceedings, the appellant submitted new claims 1 to 38, a "statement of facts" by Mr Andrew F. Rutkiewic and further documents D23 to D29.

IV. In its letter dated 22 July 1997 the respondent requested postponement of the oral proceedings to permit the new facts and evidence submitted by the appellant on 1 July 1997 be properly considered by the Respondent.

V. On 25 July 1997 the board informed the parties by telecopy that the oral proceedings would take place on 1 August 1997 as summoned.

VI. Oral proceedings took place on 1 August 1997.

(i) The appellant withdrew its new set of claims 1 to 38, filed on 1 July 1997, and requested that the patent be maintained in amended form on the basis of claims 1 to 64 as submitted at the oral proceedings.

(ii) With respect to procedure, the respondent requested postponement of the oral proceedings and rejection of the material submitted by the appellant on 1 July 1997 as inadmissible.

With respect to the substantial subject-matter, the respondent requested that the appeal be dismissed.

(iii) The independent claims submitted during the oral proceedings read as follows:

"1. A thermoformable laminate for use in forming an outer portion of an exterior car body panel, the laminate comprising a thin, semirigid self-supporting backing sheet (72) made from a synthetic resinous material, and a flexible decorative sheet material (41) on the backing sheet (72), wherein the decorative sheet material comprises an automotive quality paint coat (44) bonded to a face of the backing sheet (72), in which the paint coat (44) comprises an an outer clear coat (45) and an underlying colour coat (46) bonded between the outer clear coat and the backing sheet (72), in which the clear coat (45) comprises an outdoor weatherable synthetic resinous coating in dry, thin film form having an outer surface with an exterior automotive gloss level, and the colour coat (46) comprises a pigmented exterior automotive synthetic resinous coating visible through the outer clear coat (45), the resulting paint coat (44) having a distinctiveness-of-image of at least about 60 percent and sufficient elongation and resistance to deglossing such that the laminate is thermoformable into a highly contoured three dimensional shape in which the paint coat (44) substantially retains said gloss level and distinctiveness-of-image during thermoforming and provides predetermined appearance and durability properties sufficient to be useful as an exterior automotive paint finish following thermoforming of the laminate (70) and bonding of the thermoformed laminate to an underlying structural panel."

"20. A process for applying a paint coat (44), suitable for exterior automotive use, to a contoured plastic exterior body panel of a motor vehicle, comprising the steps of:
casting a clear coat (45) of an outdoor weatherable synthetic resinous material in thin film form onto a surface of a casting sheet (42), and drying the clear coat (45) on the casting sheet (42), the sheet (42) having a smooth surface for transferring to the surface of the dried clear coat (45), in contact with the casting sheet (42), a gloss level sufficient for exterior automotive use;
forming a pigmented synthetic resinous automotive colour coat (46) which is dried in thin film form and bonded to the clear coat (45);
transferring the dried clear coat (45) and colour coat (46) to a thin, semirigid self-supporting thermoformable backing sheet (72) of a synthetic resinous material to form a composite paint coat (44) bonded to a face of the backing sheet (72), and removing the casting sheet (42) from the transferred clear coat (45), the clear coat (45) forming the exterior surface of the transferred composite paint coat (44) with the colour coat (46) being bonded between the outer clear coat (45) and the backing sheet (72), in which the outer surface of the clear coat (45) substantially retains the gloss level transferred to it from the casting sheet (42);
thermoforming the backing sheet (72) and the composite paint coat (44) thereon to form a contoured, three dimensionally shaped preformed laminate (116); and
placing the preformed laminate (116) in a mold (117) and molding a synthetic resinous substrate material (118) to the backing sheet of the preformed laminate to form a contoured exterior

vehicle body panel (130) with a finished exterior automotive paint coat;
the composite paint coat (44) being extendable and formable to said contoured shape while substantially retaining said gloss level during the thermoforming step; the backing sheet (72) having sufficient thickness and elongation to absorb defects present in the substrate material to retain an essentially defect-free surface on the clear coat (45) following adherence of the preformed laminate (116) to the substrate material, thereby forming a glossy, weatherable defect-free exterior automotive quality paint coat on the finished vehicle body panel."

"39. A contoured exterior plastic body panel (130) for motor vehicles, the panel having a synthetic resinous exterior automotive quality paint coat (44) bonded to a thin semirigid, self-supporting synthetic resinous backing sheet (72) to form a laminate (116) which has been thermoformed into a contoured, three dimensional shape and bonded to an underlying molded plastic substrate (118) panel, the paint coat comprising a substantially transparent, cast outer clear coat (45) of a weatherable polymer in dry film form having a high gloss outer surface, and a pigmented synthetic resinous automotive colour coat (46) on the undersurface of the outer clear coat, the resulting paint coat having a distinctiveness-of-image of at least about 60 percent, the backing sheet (72) having sufficient thickness and elongation to have absorbed defects in the substrate material, thereby providing a

glossy, weatherable, defect-free exterior automotive quality paint finish on the contoured outer surface of the panel."

"54. A process for applying a paint coat, suitable for exterior automotive use, to a plastic exterior body panel of a motor vehicle, the process comprising the steps of:
applying a clear coat (45) of a solution of vinylidene fluoride and acrylic resin in thin film form onto a surface of a flexible casting sheet (42), and drying the clear coat (45) on the casting sheet (42), the surface of the sheet having a specular reflectance for transferring to the surface of the dried clear coat a gloss level sufficient for exterior automotive use;
casting a colour coat (46) of a pigmented solution of vinylidene fluoride and acrylic resin in thin-film form and drying the colour coat (46);
transferring the dried clear coat (45) and colour coat (46) to a semirigid self-supporting backing sheet (72) of a synthetic resinous material to form a composite paint coat (44) bonded to a face of the backing sheet (72), in which the clear coat forms the exterior surface of the transferred paint coat (44) and the colour coat (46) is bonded between the clear coat (45) and the face of the backing sheet (72) and in which the exterior surface of the clear coat (45) substantially retains the gloss transferred to it from the casting sheet (42);
thermoforming the backing sheet (42) and the composite paint coat (44) thereon to form a three-dimensionally shaped preformed laminate (116); and

adhering the preformed laminate to a synthetic resinous substrate material to form an exterior vehicle body panel;
the clear coat (45) substantially retaining said gloss level during the thermofroming step; the backing sheet (72) having sufficient thickness and sufficient elongation to absorb defects present in the substrate material to retain an essentially defect-free gloss on the clear coat surface following adherence of the laminate to the substrate material; the composite paint coat (46) providing sufficient appearance and durability properties for use as an exterior automotive paint coat (46).

"61. A method for making a flexible decorative sheet material (41) for use in surfacing automobile body panels, the sheet material having the appearance of a glossy clear coat/colour coat automotive paint finish, comprising the steps of:

(a) casting onto a smooth surface carrier (42) an optically clear, weatherable liquid polymer;

(b) drying the liquid polymer to form a flexible optically clear film (45) on the carrier having a smooth surface in contact with the carrier; and

(c) applying to the exposed surface of the thus formed clear film (45) a thin coating of a flexible polymer with pigments distributed therein and drying the thin coating to thereby form a colour coat (46) bonded to the clear film (45) and forming with the clear film (45) a coated film (44) comprising a flexible decorative sheet material (41) having the appearance of a glossy clear coat/colour coat automotive paint finish when viewing the outer surface thereof; and

(d) removing the coated film from the carrier (42) to expose the glossy, smooth outer surface thereof, the carrier surface in contact with the clear film (45) having a specular reflectance for transferring to the outer surface of the coated film a distinctiveness-of-image of at least about 60 percent."

(iv) The appellant (patent proprietor) argued essentially as follows:

The request of the respondent for postponement of the oral proceedings and for disregarding the new material submitted on 1 July 1997 should be rejected. The newly submitted material was intended to back up the appellant's view that document D2 did not inherently disclose a DOI-value of at least 60%, contrary to the view of the board expressed in its communication of 21 February 1997. This material did not add any surprising facts or arguments to the previous reasoning of the appellant.

Document D2, which represented a state of the art in the meaning of Article 54(3) EPC, had only to be considered with respect to novelty, and its content should, therefore, not be considered in combination with other prior art documents.

Document D2 did not disclose the feature of claim 61 that the clear coat should be dried on the carrier before the pigmented colour coat is applied onto it. D2 was silent about an active drying step intermediate the steps of applying the clear coat and applying the colour coat. On the contrary, D2, cf. column 3, lines 20 to 22

and claim 20, taught that the pigmented colour coat should be preferably sprayed on the clear film before the film has solidified.

Furthermore, document D2 did not disclose the feature of claims 1, 20, 39 and 54 that the clear coat/colour coat is bonded to a self-supporting semirigid backing sheet. The wordings in column 3, lines 23 to 27, and in column 6, lines 42 to 44, of document D2 did not point to the use of a backing sheet which was itself self-supporting and semirigid.

Moreover, document D2 was silent about a DOI-value, and there were no indications in D2 that the flexible decorative sheet material inherently had a DOI-value of at least 60%.

Therefore, the subject-matter claimed in the patent in suit was novel over the subject-matter disclosed in D2.

(v) The respondent (opponent) argued essentially as follows:

The material submitted by the respondent on 1 July 1997 was so extensive that a proper consideration of this late filed material by the respondent was not possible within the short time period before the scheduled oral proceedings, and therefore, a postponement of the oral proceedings would be justified.

By the material submitted by the appellant on 1 July 1997 a new substantiation of the appeal was introduced. During the course of the appeal no new facts or evidence had been introduced into

the proceedings by the respondent or the board which might justify the late filing of this material. Therefore, the board should disregard this late filed material under Article 114(2) EPC.

Novelty of the subject-matter of the patent in suit was allegedly based by the appellant on the features

(a) that the clear coat/colour coat was bonded to a self-supporting semirigid backing sheet,

(b) that the clear coat was dried before the colour coat was applied onto it,

(c) that the flexible decorative sheet material had a DOI-value of at least 60 percent.

These features were, however, implicitly disclosed in document D2. As to feature (a), reference was made to column 3, lines 23 to 27 and column 6, line 42 to column 7, line 13, and column 7, lines 54 to 58, wherein reference to sheet-form was made and backing sheets were mentioned, like multiple-laminates or wood or metal which had to be considered as being self-supporting and semirigid. As to feature (b), reference was made to column 3, lines 12 to 22, and column 4, lines 35 ff. In particular, the phrase in lines 20 to 22 of column 3 "The pigmented polymer is preferably sprayed on the substantially clear film before the film has solidified" implied also the only other possibility of spraying the pigmented polymer onto the clear film after the film had solidified. As to feature (c), it was clear to

the person skilled in the art that the flexible decorative sheet of document D2, which was intended for use in surfacing automobile body panels, had to have a DOI-value of at least 60 percent corresponding to a standard requirement of the automobile industry.

Therefore, the subject-matter claimed in the patent in suit was not novel over the subject-matter disclosed in document D2.

Reasons for the Decision

1. *Procedural matters*

The material submitted by the appellant one month before the scheduled oral proceedings was sumbitted to support its arguments against the board's view expressed in its communication annexed to the summons for oral proceedings stating that document D2 inherently disclosed a DOI-value of at least 60 percent. This material does not add any surprising new facts and arguments to the previous reasoning of the appellant. Further, the board considers this material to be of relevance for the clarification of the question whether document D2 disclosed a DOI-value as claimed in the patent in suit. The board holds that this material is not unduly voluminous or extensive and that the respondent should have been able to catch its disclosure in this respect before the oral proceedings.

Therefore, the board does not allow the request for postponement of the oral proceedings and has considered all the material filed by the appellant on 1 July 1997.

2. *Amendments*

The granted claims have been amended as follows:

In claim 1 the word "self-supporting" has been inserted in the second line between the words "semirigid" and "backing sheet", and the wording "characterised in that" has been replaced by the word "wherein".

In claim 20 the same amendments as in claim 1 have been carried out in lines 15 and 22 of the claim page 32.

In claim 39 the wording "semirigid, self-supporting" has been inserted in the second line between the words "thin" and "synthetic".

Granted claims 54 to 61, 69 to 71 and 76 have been cancelled and granted claims 62 to 68 and 72 to 75 have been renumbered as claims 54 to 64.

In the granted claim 62 (new claim 54) the word "self-supporting" has been inserted in line 34 of the claim page 35 between the words "semirigid" and "backing sheet".

In the granted claim 72 (new claim 61) the wording "characterised by" in line 3 has been replaced by the word "comprising".

The added feature that the semirigid backing sheet is self-supporting is disclosed on page 12, line 45 of the granted patent and on page 35, line 18 of the originally filed description. By the addition of this feature the scope of protection conferred to the patent is restricted.

The description of the granted patent has been adapted to the amended claims.

The amendments to the claims and the description are not objectionable on the basis of Article 123 EPC.

3. *Novelty*

3.1 During the appeal proceedings the patent in suit was attacked by the respondent only on the ground of lack of novelty in view of the disclosure of document D2.

3.2 Document D2, which represents a state of the art in the meaning of Article 54(3) and (4) EPC, discloses a thermoformable decorative sheet material for use in surfacing automobile body panels, wherein the sheet material comprises a thin adhesive coating (13) made from a synthetic resinous material, an automotive quality paint coat layer (12) bonded to a face of the adhesive coating (13) and an outer clear coat layer (11) overlying the colour coat layer (12), wherein the clear coat layer (11) comprises an outdoor weatherable synthetic resinous coating in dry, thin film form, and the colour coat layer (12) comprises a pigmented exterior automotive synthetic resinous coating visible through the outer clear coat layer (11) (see claims 1 and 3 and figures 1 and 2 of D2).

Document D2 is silent about the mechanical properties of the adhesive coating (13).

With reference to the disclosure of D2 in column 3, lines 23 to 27, column 6, line 42 to column 7, line 13 and column 7, lines 54 to 58, the respondent contends that the adhesive coating (13) of the decorative sheet material known from document D2 was a backing sheet which inherently had the property of being semirigid and self-supporting.

The board, however, cannot find that this contention is supported by the disclosure of D2.

Multiple-laminate-films as mentioned in column 6, line 42 to page 7, line 13, are not necessarily semirigid, self-supporting backing sheets. The supporting substrates including metal or wood mentioned in column 7, lines 54 to 58, of D2 do not refer to the adhesive coating (13) but to the supporting substrate (31) of the automobile body part on which the decorative sheet material including the adhesive coating is adhered (see claim 15, column 8, lines 1 to 6 and figure 4 of D2). The indication in column 3, lines 25 and 26, of D2 that the "finish" may be shipped in sheet form to a number of automobile assembly plants refers to the flexible decorative sheet material as a whole including the adhesive coating. Therefore, from this indication nothing can be deduced about the mechanical properties of the adhesive coating. Moreover, from the bonding technique mentioned in column 8, lines 11 to 28, of D2, it can be learnt that the decorative sheet material including the adhesive coating (13) is placed into a mould and then conforms to the contoured moulding surface. This moulding technique implies that the decorative sheet material including the adhesive coating is rather limp and supple than self-supporting and semirigid.

Therefore, the property of the adhesive coating of being semirigid and self-supporting can neither explicitly nor implicitly be derived from the disclosure of document D2.

Consequently, the subject-matter of claims 1, 20, 39 and 54 comprising the feature of bonding a semirigid, self-supporting backing sheet to the clear coat/colour coat decorative sheet material is novel with respect to the subject-matter disclosed in document D2.

3.3 The method of claim 61 of the patent in suit for making a flexible decorative sheet material comprises the feature of drying the clear coat on the carrier before the colour coat is applied onto the dried clear coat (see paragraphs (b) and (c) of claim 61).

With reference to the disclosure of document D2 in column 3, lines 13 to 22, column 4, lines 35 to 48, and claim 16, the respondent contends that D2 already disclosed the method of claim 61 including the step of drying the clear coat before applying the colour coat, and that therefore, the method of claim 61 of the patent in suit was not novel.

This contention can, however, not be based on the disclosure of D2 for the following reasons:

In column 3, lines 20 to 22 and in claim 20 of D2 there is mentioned as a preferred method of applying the colour coat on the clear coat that the pigmented polymer (colour coat) be "sprayed on the substantially clear film before the film has solidified". This preferred spraying technique is quite the contrary of the afore-mentioned drying step required by the method of claim 1 of the patent in suit.

The respondent argues that, since in D2 the said spraying technique was mentioned as a preferred technique only, the person skilled in the art would imply that in the more general method according to claim 16 of D2 the colour coat was either applied to the dried or to the undried clear coat.

The following reasons stand against this view of the respondent:

Firstly, a drying step of the clear coat on the carrier is not at all disclosed in D2 with respect to the application of the colour coat on the clear coat. Secondly, the term "solidified" is not equivalent to the term "dried". A solidified film as mentioned in claim 20 or in column 3, line 22, of D2 may still be wet and is not necessarily a dried film.

Also the description in column 4, lines 35 to 48, dealing in general with possible production techniques for the clear coat film does not disclose, either explicitly or implicitly, a drying step of the clear coat on the carrier before application of the colour coat as required by claim 61 of the patent in suit. The only detailed method disclosed in D2 for preparing the clear coat/colour coat-laminate (see column 7, lines 14 to 37, in connection with figure 3) expressly excludes a drying step of the clear coat and, on the contrary, comprises spraying the colour coat on the clear coat before the clear coat has solidified and only then drying the clear coat/colour coat film (see column 7, lines 28 to 31).

Therefore, the method of claim 61, comprising the step of drying the clear coat on the carrier before application of the colour coat according to paragraphs (b) and (c), is novel with respect to the method disclosed in document D2.

4. The questions of inventive step (Article 56 EPC) and enabling disclosure (Article 83 EPC) were no longer at issue in the appeal proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent in amended form on the basis of claims 1 to 64 as submitted in the oral proceedings of 1 August 1997 and amended pages 2, 5 and 12 of the description as submitted in the oral proceedings of 1 August 1997, and the remainder of the description and figures as granted.

The Registrar:

A. Townend

The Chairman:

W. D. Weiß