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**Datasheet for the decision
of 20 June 2024**

Case Number: T 2537/22 - 3.3.09

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Language of the proceedings: EN

Title of invention:

METHOD FOR PRODUCING A MULTILAYER FILM

Patent Proprietor:

Nordmeccanica SpA

Opponent:

Sun Chemical Corporation

Headword:

Multilayer Film/NORDMECCANICA

Relevant legal provisions:

EPC Art. 56

RPBA 2020 Art. 12(4), 12(6)

Keyword:

Decisions cited:

Catchword:



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Case Number: T 2537/22 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 20 June 2024

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 4 October 2022
revoking European patent No. 3455066 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman F. Rinaldi
Members: A. Veronese
G. Decker

Summary of Facts and Submissions

- I. The appeal was filed by the patent proprietor (appellant) against the opposition division's decision to revoke the European patent.
- II. With its notice of opposition the opponent (respondent) had requested that the patent be revoked in its entirety on the grounds under Article 100(a) (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC.
- III. The documents submitted during the opposition proceedings included:
- D1: US 4,184,005
D4: EP 2 085 218 A2
- IV. The opposition division's decision can be summarised as follows:
- Claim 1 of the main request, filed during the oral proceedings before the opposition division, contained subject-matter extending beyond the content of the application as filed and lacked clarity.
 - The subject-matter of claim 1 of auxiliary request 1, filed during the oral proceedings before the opposition division, did not involve an inventive step over D1, the closest prior art, in combination with D4.

V. With its statement setting out its grounds of appeal the appellant filed a main request and auxiliary requests 1 and 2.

VI. Claim 1 of the main request reads as follows:

"1. Method for producing a multilayer film (M) comprising at least two layers (S1, S2) joined by means of a solventless two-component adhesive, comprising the following steps:

- spreading a first component (A) of a two-component adhesive on a first face of a first layer of film;*
- spreading a second component (B) of the two-component adhesive on a first face of a second layer of film;*
- bringing the aforesaid first and second faces of the first and second layers into mutual contact joining the components (A) and (B) to form an adhesive and join the two layers (S1, S2) in a multilayer film (M); and*
- winding the multilayer film (M) obtained,*

wherein a two-component adhesive formulated as a kit is used, the two components of said kit being:

- (a) a component A comprising at least a functionalized compound with an isocyanate group, and*
- (b) a component B comprising at least a functionalized compound with a group having an active hydrogen, wherein such functionalized compound is selected from polyols, which are aliphatic amino alcohols comprising at least two primary alcohol groups and at least one tertiary amino group, wherein the OH groups are equal to the isocyanate groups."*

VII. Claim 1 of auxiliary request 1 reads as follows:

"1. Method for producing a multilayer film (M) comprising at least two layers (S1, S2) joined by means of a solventless two-component adhesive, comprising the following steps:

- spreading a first component (A) of a two-component adhesive on a first face of a first layer of film;*
- spreading a second component (B) of the two-component adhesive on a first face of a second layer of film;*
- bringing the aforesaid first and second faces of the first and second layers into mutual contact joining the components (A) and (B) to form an adhesive and join the two layers (S1, S2) in a multilayer film (M); and*
- winding the multilayer film (M) obtained;*

wherein the step comprising spreading a component (A, B) of the adhesive on the face of a layer (S1, S2) comprises the following steps:

- arranging at least a first metering roller (121) and a second metering roller (122), mutually facing and spaced by a gap (G), wherein at least the second metering roller (122) is rotatable with respect to the first (121) and is in contact with a component (A, B) of the adhesive;*
- arranging a regulation device (130) to move at least the first metering roller (121) with respect to the second metering roller (122); and*
- regulating the gap (G) between the metering rollers, to regulate the thickness of the component of the adhesive (A, B) spread on the layer of film*

(S1, S2), as a function of the geometric and/or dimensional parameters of the first metering roller (121); and

- *wherein the angular position of the first metering roller is maintained fixed during the process."*

VIII. Claim 1 of auxiliary request 2 corresponds to claim 1 of auxiliary request 1, except that it further specifies the method by specifying that:

"... and wherein the step comprising regulating the gap between the metering rollers comprises the following sub-steps:

- *detecting the angular position of the first metering roller (121);*
- *determining geometric and/or dimensional parameters of an operating zone of the first metering roller (121) as a function of the aforesaid angular position;*
- *activating the regulation system (130) to move the first metering roller (121) toward or away from the second metering roller (122), as a function of the aforesaid geometric and/or dimensional parameters."*

IX. The appellant's arguments, where relevant to the decision, can be summarised as follows:

- The main request, filed with the statement setting out the grounds of appeal, addressed the negative findings in the decision under appeal that the main request filed during the oral proceedings before the opposition division contained added subject-matter and lacked clarity.

- The subject-matter of auxiliary request 1, corresponding to auxiliary request 1 of the decision under appeal, involved an inventive step starting from D1, the closest prior art, in combination with D4.
- Claim 1 of auxiliary request 2 contained the features of claims 1 and 4 of auxiliary request 1. Like that of auxiliary request 1, the claimed subject-matter involved an inventive step starting from D1, the closest prior art, in combination with D4.
- In its statement setting out the grounds of appeal the appellant requested oral proceedings as an auxiliary measure; however, after receiving the preliminary opinion from the board in a communication under Article 15(1) RPBA, it stated in a letter dated 15 May 2024 that it did not intend to attend the oral proceedings.

X. The opponent's (respondent's) arguments, where relevant to the decision, can be summarised as follows:

- The main request was new and contained claims including features taken from the description. It was the fourth main request proposed by the patent proprietor, but still did not overcome the objections raised. There was no justification for filing this request on appeal. Therefore, the main request was not to be admitted into the appeal proceedings.
- As correctly decided by the opposition division, the subject-matter of auxiliary request 1 did not

involve an inventive step starting from D1, the closest prior art, in combination with D4.

- Auxiliary request 2 was a new request which should have been filed during the oral proceedings held before the opposition division. There were no circumstances justifying the admission of this request on appeal.

The requests

- XI. The appellant requested that the appealed decision be set aside and that the patent be maintained on the basis of the main request or, alternatively, on the basis of the auxiliary requests 1 and 2, all filed with the statement of grounds of appeal.
- XII. The respondent requested that the appeal be dismissed.

Reasons for the Decision

- 1. *Cancellation of the oral proceedings*
 - 1.1 According to established case law, where oral proceedings are scheduled upon a party's request and that party subsequently expresses its intention not to attend, such statement is generally interpreted as a withdrawal of the request for oral proceedings (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition 2022, III.C.4.3.2, with further references).
 - 1.2 As the board does not consider it expedient or necessary to hold oral proceedings (see Article 116(1) EPC), the oral proceedings were cancelled and a

decision handed down in written proceedings
(Article 12(8) RPBA).

Main request

2. *Admittance of the main request*

2.1 The main request is a new request. It was filed for the first time with the appellant's statement setting out the grounds of appeal. Claim 1 of this request differs from claim 1 of the main request decided upon by the opposition division in that it defines component B as

"comprising at least a functionalized compound with a group having an active hydrogen, wherein such functionalized compound is selected from polyols, which are aliphatic amino alcohols comprising at least two primary alcohol groups and at least one tertiary amino group".

2.2 Furthermore, it differs from claim 1 of the previous main request in that it specifies that *"the OH groups are equal to the isocyanate groups"*.

2.3 The OH groups are those present in the compound of component B and the isocyanate groups are those present in the compound of component A.

2.4 As requested by the respondent, the main request is not admitted into the appeal proceedings under Article 12(4) and (6) RPBA.

2.5 As noted by the respondent, the appellant had amended its main request three times during the opposition proceedings: twice during the written proceedings and once during the oral proceedings held before the

opposition division. The ratio between the number of OH groups and isothiocyanate groups and/or between components A and B had been defined differently in each of these requests. Different definitions of this ratio had been given to address, *inter alia*, objections of lack of clarity and added subject-matter raised by the opponent and by the opposition division.

2.6 Claim 1 of the main request, as discussed in the decision under appeal, specified that the "*equivalent weight ratio between component (A) and component (B) is 1:1*". During the oral proceedings the opposition division found that claim 1 of this main request contained added subject-matter and lacked clarity.

2.7 The main request filed with the statement setting out the grounds of appeal addresses these objections; however, the amendments to claim 1 result in an amendment to the party's case. Therefore, the admission of the main request is at the board's discretion under Article 12(4) RPBA.

2.8 Considering that:

- the appellant was allowed to replace all its previously filed requests with new ones during the oral proceedings held before the opposition division and that
- the clarity and added subject-matter issues were essentially the same as those already discussed in the first-instance written proceedings,

the board holds that the appellant should have addressed the opposition division's negative finding by

filing the new request before the closure of the oral proceedings at the latest.

- 2.9 Furthermore, the main request filed with the statement of grounds of appeal contains new definitions of the compound present in component B and of the ratio between the OH and the isocyanate groups, which can only be found in the description. These definitions raise new issues concerning added subject-matter and clarity, which should have been discussed during the opposition proceedings.
- 2.10 This means that, if the appellant intended to rely on a request containing claims including these new definitions, it should have already filed it during the opposition proceedings. For these reasons, the main request is not admitted into the appeal proceedings (Article 12(4) and (6) RPBA).

Auxiliary request 1

3. Auxiliary request 1 corresponds to auxiliary request 1 on which the decision under appeal is based.
4. *Inventive step*
- The closest prior art*
- 4.1 The parties agree that D1 is the closest prior art and the board sees no reason to diverge from this opinion.
- 4.2 Like the opposed patent, D1 discloses (see claim 1 and the passage from column 5, line 56 to column 6, line 4) a method for producing a multilayer film comprising two layers joined by a solventless two-component adhesive, which comprises the steps of:

- spreading a first component A of the two-component adhesive on a face of a first film;
- spreading a second component B of the two-component adhesive on a face of a second film;
- bringing those faces of the two films into contact so that components A and B form the adhesive and join the layers of the film; and
- winding.

The difference

- 4.3 The claimed method differs from that in D1 on account of the features characterising the steps for spreading the components A and B of the two-component adhesive onto the faces of the first and second layers of film.
- 4.4 In particular, D1 does not specify steps involving the use of a spreading system including the metering rollers (121) and (122) and the regulation device (130) for regulating the gap between the rollers and the thickness of components A and B, and in which the angular position of the first metering roller is maintained fixed during the process.
- 4.5 D1 states that the two reaction components are applied "by means of rollers" and that the two films "are pressed together between a pair of rollers" in column 5, lines 56 to 67; however, no details are given of how the rollers are arranged or of the use of a regulation device regulating the dimension of the gap between the rollers.

Technical effect and underlying technical problem

- 4.6 The appellant argued that the claimed spreading system allowed the gap between the metering rollers and the

thickness of the adhesive layers applied to the material to be precisely regulated; this was regardless of the dimensional and/or geometric parameters of the first metering roller. This effect could be derived from the third and fourth full paragraphs on page 6 of the application as filed.

- 4.7 It is credible that, by including means for regulating the distance between the rollers, it is possible to adjust the dimension of the gap between the rollers. Since the dimension of this gap is determined by the size of the rollers and possibly by defects, such as eccentricity, in the rollers, it is also credible that differences in the thickness of the components making up the adhesive system can be minimised if the system comprises a device controlling the dimension of the gap.
- 4.8 Relying on this effect, the appellant defined the underlying technical problem as that of providing a method "cancelling or in any case limiting the effects that the geometric and/or dimensional tolerances (i.e. defects) of the first metering roller would have on the actual value of the aforesaid gap[,] when the first metering roller is maintained blocked in rotation". The problem of correcting such tolerances is mentioned in the third and fourth paragraphs on page 7 of the application as filed.
- 4.9 The respondent argued that the system could not compensate for any possible geometric defect of the rollers; however, the board notes that this is already accounted for by the wording "limiting the effect" used above when defining the aforementioned problem. Furthermore, the respondent's argument is a mere attempt to "tear down" the invention, focusing

deliberately on embodiments which would not make technical sense and for which the skilled person would not contemplate relying on the teaching of the patent and on common general knowledge.

4.10 The respondent also submitted that the appellant's line of argument regarding the underlying technical problem should not be admitted on appeal under Article 12(4) RPBA because it was not relied on during the opposition proceedings.

4.11 The board does not agree. First of all, as mentioned above, both the purported effect and the underlying problem are mentioned in the application as filed. Furthermore, the importance of regulating the distance between the rollers when making thin adhesive layers was discussed during the oral proceedings; see page 4 of the minutes. The allegedly new arguments therefore do not result in any substantial or unexpected change to the discussion. Furthermore, even if the board were to consider the appellant's arguments to be new, it holds that they can be admitted into the proceedings for the reasons set out above and since they were presented at the earliest possible stage of the appeal proceedings.

4.12 For these reasons, it is concluded that the problem may be formulated as proposed by the appellant.

Obviousness of the proposed solution

4.13 As argued by the respondent, when confronted with the underlying problem, the skilled person would have turned to D4, which discloses a laminating device comprising spreading units including metering rollers and a system for regulating the gap between them.

- 4.14 Taking into account the teaching of this document, the skilled person would have modified the system in D1 by providing a device including the claimed spreading system and a method for producing a film as specified in claim 1, without the need for an inventive step.
- 4.15 The spreading units in the system in D4 include a first and a second metering roller (figure 3, rollers 9 and 10), corresponding to the claimed rollers (121 and 122). From the wording in paragraph [0022] of D4 "at least one of said rollers is rotated", it is evident that D4 discloses an embodiment like that in claim 1, in which one roller rotates while the other is maintained in a fixed angular position. Furthermore, paragraph [0022] teaches that the mutual position of the rollers is "adjustable with devices of known type, so as to leave a space of adjustable thickness ... between the two rollers ... when at least one of said rollers is rotated".
- 4.16 Since the gap between the rollers depends on the dimension, geometry and arrangement of the first and second rollers, the regulation device of known type mentioned in paragraph [0022] must be controlled taking into account the geometric and/or dimensional parameters of those rollers, and necessarily also of the first roller of which the angular position is fixed.
- 4.17 D4 does not mention "defects of the roller"; however, the size of the gap in D4 is determined by the distance between the surface of the part of the first metering roller which is maintained in a fixed angular position and the opposite surface of the second metering roller which rotates. This distance is determined by the size,

arrangement and any imperfection, e.g. eccentricity, of the rollers. Therefore, by including the spreading unit from D4 in the system in D1, the method for producing the film inevitably includes a step in which the gap between the metering rollers is regulated on the basis of the dimensional and geometric parameters of the first metering roller.

- 4.18 For these reasons, the skilled person would have provided a method for producing a film as specified in claim 1 without exercising inventive skill.
- 4.19 The appellant argued that the skilled person would not have taken into account D4, because this document related to a method for bonding three rather than two layers. Furthermore, it argued that the adhesive layer applied to the roller in D4 was obtained by pre-mixing the adhesive components. The obtained layer was thus thicker than the two layers in claim 1, which contained component A or component B only. Since the layer in D4 was thicker, shape tolerances were less relevant to the quality of the product.
- 4.20 These arguments are not convincing. Regardless of whether a two-layer or a three-layer film is produced, the procedure for binding the layers is the same. Furthermore, even if a layer comprising pre-mixed components were thicker than one comprising one component only, it would still be a very thin layer requiring the thickness to be controlled analogously. It is also noted that claim 1 does not specify the thickness of the layers comprising the individual components A and B.

4.21 For these reasons, it is concluded that the method in claim 1 does not involve an inventive step over the teaching of D1 combined with that of D4.

Auxiliary request 2

5. *Admittance*

5.1 Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 discussed in the decision under appeal in that the step specified in dependent claim 4 has also been included.

5.2 The appellant has not provided any reason for filing this request only on appeal.

5.3 As argued by the respondent, auxiliary request 2 should have been filed during the oral proceedings before the opposition division.

5.4 It is first noted that auxiliary request 1 derives from a request which was filed on its own very late, namely during the oral proceedings before the opposition division. Furthermore, the opposition division's finding that the subject matter of claim 1 of that late-filed request did not involve an inventive step over D1 and D4 could not have been surprising.

5.5 Claim 1 of that request was obtained by adding the features of dependent claim 5 as granted to claim 1 as granted; however, an objection against claim 5 as granted based on D1 and D4 had already been raised in the notice of opposition; see paragraph 4.16.

5.6 The filing of auxiliary request 2 on appeal therefore cannot be considered a response to an unexpected

outcome of the proceedings. Furthermore, as noted by the respondent, this request raises new issues of lack of clarity which were not discussed during the proceedings before the opposition division.

5.7 For this reason, it is concluded that auxiliary request 2 should not be admitted on appeal (Article 12(4) and (6) RPBA).

6. As a result, since the main request and auxiliary request 2 are not admitted into the proceedings and since auxiliary request 1 is not allowable, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Götz-Wein

F. Rinaldi

Decision electronically authenticated