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Datasheet for the decision of 3 April 2014

Case Number: T 1327/11 - 3.2.07

Application Number: 06110800.7

Publication Number: 1702848

IPC: B65B61/00, B65B51/02, B65B19/22

Language of the proceedings: EN

Title of invention:
A method and a device for the assembly of packets for tobacco products

Patent Proprietor:
G.D S.p.A.

Opponent:
Focke & Co. (GmbH & Co. KG)

Headword:

Relevant legal provisions:
EPC Art. 56
RPBA Art. 13(1)

Keyword:
Admissibility of main request previously withdrawn and re-introduced during oral proceedings -
no;
Inventive step -
method of claim 1 of the first auxiliary request obvious in view of closest prior art as referred to in the patent in suit and heat-reactivation step derivable from D11

Decisions cited:
G 0001/10, G 0003/89

Catchword:

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Case Number: T 1327/11 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 3 April 2014

Appellant: (Patent Proprietor)	G.D S.p.A. Via Battindarno, 91 40133 Bologna (IT)
Representative:	Bianciardi, Ezio Bugnion S.p.A. Via di Corticella, 87 40128 Bologna (IT)
Respondent: (Opponent)	Focke & Co. (GmbH & Co. KG) Siemensstrasse 10 27283 Verden (DE)
Representative:	Ellberg, Nils Meissner, Bolte & Partner GbR Hollerallee 73 28209 Bremen (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 31 March 2011 concerning maintenance of the European Patent No. 1702848 in amended form.**

Composition of the Board:

Chairman	H. Meinders
Members:	H.-P. Felgenhauer
	E. Kossonakou

Summary of Facts and Submissions

I. The appellant (proprietor) filed an appeal against the decision of the opposition division maintaining European patent No. 1 702 848 as amended.

II. The appellant requested the impugned decision to be set aside and the European patent maintained in accordance according with one of the main request, the first auxiliary request or the second auxiliary request, the latter being the version of the patent as maintained by the opposition division.

The main request formed part of the statement of grounds of appeal, but was substituted as main request by the first auxiliary request with letter of 3 March 2014. It was reinstated as such at the oral proceedings before the Board.

The respondent (opponent) requested that the appeal be dismissed and that the re-introduction of the main request, originally filed with the statement setting out the grounds of appeal, not be admitted into the proceedings.

III. Claim 1 of the main request (which is identical to claim 1 of the first auxiliary request) reads as follows:

"A method of assembling packets for tobacco products directed along a wrapping line (1) of a packaging machine equipped with feed means supplying a wrapping material (3) from which the packets (2) are made, including the step of applying a layer or dab of cold-setting adhesive (8) to predetermined areas (8a, 8b) of the wrapping material (3), and the step of folding the

wrapping material (3) to form a packet, and further including at least one step of reactivating the cold-setting adhesive (8) applied to the predetermined areas (8a, 8b), by exposing the selfsame areas to heat, at a predetermined reactivation temperature (tr), wherein the heat-reactivation step is initiated following a break in the operation of the packaging machine lasting for a predetermined interval of time characterised in that the method further includes the steps of measuring the length of time (T) elapsing during a break in operation of the packaging machine, and comparing the resulting stoppage time (T) with the predetermined interval of time (T1 – T2) between a first predetermined critical time value (T1) and a second predetermined critical time value (T2), within which any degradation of the cold-setting adhesive (8) and consequent loss of bonding properties can be reversed by implementing the heat-reactivation step, the heat reactivation step initiating when the stoppage time (T) falls between the first and second predetermined critical time values T1 and T2."

The difference between the main and the first auxiliary request lies in the deletion of claim 10 in the latter and the manner in which reference was made to earlier claims in the dependent claims.

IV. The following documents relied upon in the decision under appeal are referred to

D1 EP-B-1 702 848 (patent in suit) paragraphs [0002] to [0008]

D11 DE-C-40 20 935.

V. Impugned decision

According to the impugned decision (reasons, point 9.2) the method of claim 1 of the then main request (identical with the subject-matters of the claims 1 of the present main and first auxiliary requests) does not involve inventive step starting from the closest prior art according to D1 and considering general technical knowledge as evidenced by D11.

VI. The submissions of the appellant can be summarised as follows:

The re-introduced main request should be admitted by the Board since the criteria for the Board to exercise its discretionary power in its favour are fulfilled.

The method of assembling packets for tobacco products of claim 1 of the first auxiliary request involves an inventive step since the heat-reactivation step of this method is not rendered obvious by the available prior art. This holds true even if the method of D1 is considered as closest prior art and in case D11 is considered as further prior art.

VII. The submissions of the respondent can be summarised as follows:

The re-introduced main request should not be admitted as late filed and for lack of a sufficient reason for its re-introduction. Also the circumstances to be considered do not allow the Board to exercise its discretionary power such that the request is to be admitted.

The method of assembling packets for tobacco products of claim 1 of the first auxiliary request does not involve an inventive step starting from the method of D1 as closest prior art and considering further the heat-reactivation step according to D11 and the fact that the heat-reactivation step can, within the framework of regular design practice, be introduced into the method known from D1 without any inventive considerations being required.

VIII. In the annex to the summons for oral proceedings (in the following: the annex) i.a. the following issues were referred to: the application of the principle of prohibition of *reformatio in peius* with respect to the claims of the patent as maintained in amended form according to the impugned decision (point 7.2) and the question of whether the method of claim 1 (main and first auxiliary request) can be considered to involve an inventive step considering D1 as the closest prior art and furthermore D11.

IX. Oral proceedings before the Board, at the end of which the decision was announced, took place on 3 April 2014.

Reasons for the Decision

1. Procedural aspects

1.1 The appellant stated at the beginning of the oral proceedings that it rescinded the statement regarding the statement of its requests in its latest submission dated 3 March 2014 and reverted to the requests presented with the statement setting out the grounds of appeal. It thus relied upon the main request, the first

auxiliary request and the second auxiliary request filed with this statement.

1.2 The claims of the second auxiliary request filed with the statement of grounds of appeal are those with which the patent has been maintained as amended according to the impugned decision.

Following the well-established principle of prohibition of *reformatio in peius* examination of the claims of the second auxiliary request lies, as indicated in the annex (cf. point 7.2), outside the competence of the Board.

1.3 The claims 9 of the present main request and first auxiliary request differ with respect to the dependencies of these claims. Claim 9 according to the main request for instance reads in this respect "A method **as in any one of** claims 1 to 8 ..." whereas the corresponding formulation in claim 9 of the first auxiliary request, which is identical with claim 9 as granted, relates to "A method **as in** claims 1 to 8". Claim 9 of the first auxiliary request is based on claim 10 of the published (English translation of the original) application, which relates to "A method as in claims 1 to 9".

2. Admissibility of the main request

2.1 An important issue in the discussion concerning the admissibility of the re-introduced main request was whether its claim 9 infringes, due to its changed dependency as compared to the corresponding claim (claim 10) of the published (English translation of the original) application, requirements of the EPC.

2.2 A main argument of the appellant in favour of the admittance of this main request was that it has been misled by the preliminary opinion of the Board given in the annex regarding the applicability of G 1/10 (OJ EPO 2013, 194; cf. point 2.2.2 below.

2.2.1 It further argued that concerning the basis for the dependency of claim 9 of the main request the original application in Italian needs to be taken into account. This dependency has been accepted by the opposition division with respect to claim 8 of the second auxiliary request, which formed the basis on which the patent has been maintained in amended form. This claim corresponds to claim 9 of the present main request, such that the prohibition of *reformatio in peius* prevents the Board from examining claim 9, because the opponent has not appealed.

2.2.2 The appellant moreover argued that the amendment of the dependency in claim 9 of the present main request as compared to claim 10 of the published (English translation of the original) application concerns the correction of an error in documents filed with the European Patent Office according to Rule 139 EPC. This does not concern Rule 140 EPC which deals with the correction of errors in decisions. Consequently G 3/89 (OJ EPO 1993, 117) needs to be taken into account and not G 1/10 (*supra*) as referred to in the annex (point 7.1). Correspondingly Rule 80 EPC likewise referred to in that part of the annex, is not applicable to this correction.

2.2.3 The re-introduction of the main request moreover cannot come as a surprise, taking into account that such a request has been on file and has only been replaced shortly before the oral proceedings.

The issues to be dealt with concerning the allowability of the main request finally relate to interesting factual and legal aspects. Dealing with these issues should thus preclude the application of Article 13 RPBA to the detriment of the appellant.

2.3 The respondent objected to the re-introduction of the main request based on its late filing and the fact that this re-introduction came, after its recent replacement, as a surprise. Moreover, it argued that the admittance of this main request would again increase the complexity of the case which would be detrimental to procedural economy.

2.4 The Board indicated during the oral proceedings that according to Article 13(1) RPBA it is entitled to exercise its discretion concerning the admittance of the main request re-introduced at the beginning of the oral proceedings, after it had first been replaced by another request.

The Board further indicated that apart from the reasons for the late filing of this request it would also consider the criteria whether the re-introduction of the main request comes as a surprise, whether its consideration adds to the complexity of the case and whether it is detrimental to procedural economy.

2.4.1 The reason for re-introducing the main request, namely that the preliminary opinion given in the annex was considered to be erroneous cannot justify the filing of the request as late as at the beginning of the oral proceedings. The issue dealt with in the annex is not

so complex that it could not have been dealt with in the appellant's reply to the annex with its letter dated 3 March 2014.

2.4.2 The argument of the appellant that this main request should be admitted since it had already been filed earlier, so that it could have been expected as having to be dealt with, cannot be followed. It is precisely the replacement of this request one month before the oral proceedings that established the basis for the Board's and the respondent's preparation of those proceedings. Re-introducing it only at the beginning of the oral proceedings then clearly comes as a **surprise** for the Board and the respondent.

2.4.3 The issues having to be dealt with, namely the consideration of the prohibition of *reformatio in peius*, the consideration of decisions of the Enlarged Board of Appeal concerning the correction of errors in documents filed with the European Patent Office and of the correction of errors in decisions and of the original application in Italian substantially add to the **complexity** of the case **at this stage of the oral proceedings.**

In this respect the Board is, as indicated during the oral proceedings, of the opinion that concerning the allowability of this request not only legal principles and decisions of the Enlarged Board of Appeal have to be taken into account but also their applicability to the facts resulting from the amendment of e.g. claim 9 as indicated above. Concerning the prohibition of *reformatio in peius* this concerns as indicated during the oral proceedings for instance the question whether this principle, which applies to the second auxiliary request (patent as maintained) has an effect beyond

that request. As argued by the appellant, the conclusions of the opposition division in the substantive examination with respect to the claims of the patent as maintained applied also to the main request. In the latter case this would, as indicated by the Board, amount to the recognition of a binding effect of the impugned decision of the first instance with respect to the present appeal proceedings.

2.4.4 Furthermore, as indicated by the Board,the power as given by Article 13(1) RPBA to admit or not admit late filed requests has to be exercised considering all relevant circumstances, among them the criteria stated in this provision, namely the complexity of the new subject-matter submitted and the need for procedural economy. As further indicated by the Board during the oral proceedings, the aspect that this request implied interesting legal and factual questions is certainly not an aspect to be considered at this stage of the proceedings. If the appellant had wished such issues to form part of the discussion, it should have been consistent in its requests.

2.4.5 Taking due account of the criteria referred to above and furthermore of the fact that neither the principle of prohibition of *reformatio in peius* as referred to above, nor the consideration of G 3/89, nor the original application in Italian had been referred to prior to the oral proceedings, the Board decided not to admit the re-introduction of the main request into the proceedings (Article 13(1) RPBA).

2.4.6 Finally, for completeness' sake, the Board wishes to point out that the admittance of the re-introduced main request is not decisive for the present decision since the independent claims 1 (and 10) of this request and

of the first auxiliary request are the same. In the following the subject-matter of claim 1 is examined and the method of claim 1 has been found as not involving inventive step. The admittance of the re-introduced main request therefore would have made no difference to this outcome.

First auxiliary request

3. *Subject-matter of claim 1*

3.1 As indicated in the annex (cf. point 8.1) claim 1 defines a method of assembling packets for tobacco products directed along a wrapping line in which a layer or dab of cold-setting adhesive is applied to the wrapping material.

In case a break of operation occurs the following measures are foreseen:

The **length of time T elapsing during the break** (in the following: duration of a break) **is measured** and **compared with a predetermined interval of time T1 – T2** established between a first predetermined critical time value T1 and a second predetermined critical time value T2, in which time interval any degradation of the cold-setting adhesive and consequent loss of bonding properties can still be reversed by implementing the heat-reactivation step.

The **heat reactivation step is initiated when the stoppage time T falls between the first and second predetermined critical time values T1 and T2.**

The **first (lower) predetermined critical time value T1** stands (although not defined in claim 1 - see however

the description of the patent in suit, paragraph [0027]) for a value for the duration of a break. If the duration of a break T exceeds the value T1, the adhesive will have lost its bonding properties and needs to be reactivated, implying that for any break shorter than T1 no reactivation is necessary.

The **second (higher) predetermined critical time value T2** stands also for a value for the duration of a break. If the duration of a break T exceeds this value, the interruption was too long, with the consequence that the adhesive has deteriorated beyond recovery, which makes the heat-reactivation useless.

According to the grounds of appeal (page 5, lines 11 - 14) the invention lies in identifying two critical time values T1 and T2 and in comparing the duration of the break with the time interval defined by these two critical values, namely the time interval for which reactivation of the adhesive is still useful, see also the description of the patent in suit, paragraphs [0023] and [0024].

The **time intervals T1 and T2 thus depend on bonding / material properties of the adhesive**.

4. *Closest prior art*

4.1 According to the impugned decision, those parts of D1 (the patent in suit) that refer to a conventional approach of assembling packets, constitute the closest prior art (cf. impugned decision, reasons, point 9.2; grounds of appeal, page 1, last paragraph; reply of the respondent, page 3, point 3 and letter of the appellant dated 3 March 2014).

4.2 As indicated in the impugned decision and the grounds of appeal, this prior art discloses all features of claim 1 except the features that heat-reactivation of adhesive is provided for in case a break in operation of the packaging machine occurs.

4.3 Consequently, this prior art discloses with respect to the subject-matter of claim 1 a method of assembling packets for tobacco products directed along a wrapping line of a packaging machine equipped with feed means supplying a wrapping material from which the packets are made, including the step of applying a layer or dab of cold-setting adhesive to predetermined areas of the wrapping material, and the step of folding the wrapping material to form a packet.

4.3.1 This disclosure of features of the entering clause of claim 1 can be derived from the description of various types of packets (patent in suit, paragraphs [0002] to [0004]) and the description relating to "(M)achines of prior art type to manufacture such packets ..." (patent in suit, paragraph [0005]).

4.3.2 According to the description of the patent in suit furthermore "(S)uch machines are equipped with gluing devices, upstream of the folding means, that will spread or spray an adhesive substance onto selected portions of the wrapping material" (paragraph [0006]).

Concerning the adhesive it is further indicated that "(W)ith the folding steps completed, the adhesive dries to the point of setting and the outer wrapper can thus be rendered stable" (paragraph [0007]) and that "(C)onventionally, where the adhesive employed is a cold-setting type, such as a vinyl or similar glue, it will require a certain length of time to dry to the

point of setting, and accordingly, to ensure the outer wrapper can be properly stabilized during the course of this drying and setting interval, the packets must be subjected to the action of suitable restraint means, applied at least to the areas that have been glued (paragraph [0008]).

4.4 While one of the representatives for the appellant argued during the oral proceedings with respect to inventive step accepting these parts of D1 as closest prior art, the other representative took, nearly at the end of the oral proceedings, the general view that the portions of the patent in suit referred to were prior art known to the inventors, but could not be considered as closest prior art. A particular portion of D1, which should not be taken into account as prior art, was not referred to.

After the comments of the Board that in view of the clear indication in the annex (cf. points 4, 5.1 and 9.1) that in line with the impugned decision these parts of D1 are considered as the closest prior art and the fact that this view was only objected to at the final stage of the oral proceedings, the admissibility of this objection might be subject to examination, the objection was no longer pursued.

4.5 Thus, as in the appeal proceedings up to the above mentioned objection, D1 as referred to in points III and 4.3 above is considered as prior art. The qualification of D1 as closest prior art has not been objected to.

5. *Features distinguishing the method of claim 1 from the method according to D1, effect of the distinguishing features and problem solved by the method of claim 1 over the conventional method of D1*

5.1 It is common ground that, in line with the decision under appeal, the method of claim 1 is distinguished from the conventional one according to D1 by the following features

(a) at least one step of reactivating the cold-setting adhesive (8) applied to the predetermined areas (8a, 8b), by exposing the selfsame areas to heat, at a predetermined reactivation temperature (tr),

(b) wherein the heat-reactivation step is initiated following a break in the operation of the packaging machine lasting for a predetermined interval of time and

(c) wherein the method further includes the steps of measuring the length of time (T) elapsing during a break in operation of the packaging machine, and

(d) comparing the resulting stoppage time (T) with the predetermined interval of time (T1 – T2)

(e) between a first predetermined critical time value (T1) and

(f) a second predetermined critical time value (T2),

(g) within which any degradation of the cold-setting adhesive (8) and consequent loss of bonding properties can be reversed by implementing the heat-reactivation step,

(h) the heat reactivation step initiating when the stoppage time (T) falls between the first and second predetermined critical time values T1 and T2.

5.2 It is further common ground that the effects of the distinguishing features are to avoid disadvantages due to a break in production of a duration long enough for the bonding properties of the adhesive to be degraded (cf. the description of the patent in suit, paragraphs [0023], [0027]: heat-reactivation after a duration of a break exceeding a first predetermined critical time T1) and yet not long enough for the adhesive to be deteriorated beyond recovery (paragraph [0027]: no heat-reactivation after a duration of a break exceeding a second predetermined critical time T2).

5.3 The objective technical problem solved over the conventional method of D1 can thus, as referred to by the appellant, be formulated as to provide, within a method of assembling packets, a heat-reactivation step according to which disadvantages arising from the bonding properties of the adhesive degrading due to a break in production can be minimized under the condition that the heat-reactivation step is only performed when it is **necessary** (i.e. at a duration T of a break exceeding a predetermined time T1) and **useful** (heat-reactivation step no longer performed after a duration of a break T exceeding a predetermined time T2).

6. Consideration of D11

6.1 According to the impugned decision (reasons, point 9.2) "D11 (see in particular col. 2, lines 27 – 50)

substantiates that the knowledge of the existence of cold setting adhesives which can be reactivated by heat also belongs to the skilled person's general technical knowledge".

6.2 The appellant objected to this disclosure of D11 being considered as general technical knowledge.

Moreover, the representatives of the appellant have expressed contradictory opinions as to the relevance of D11 for the examination of inventive step.

6.2.1 According to one opinion the person skilled in the art would consider D11 since it relates to a similar problem as the one underlying the method of claim 1 and since it solves this problem in a similar manner.

6.2.2 According to the contrary opinion the skilled person would not take D11 into account at all since the method disclosed therein does not concern the assembly of packets for tobacco products as it is the case for the method of claim 1.

6.3 The Board is, in line with the arguments of the appellant, of the opinion that D11 refers to a known method of assembling paper bags for dry granulate mass products like flour, sugar or rice wherein an adhesive is used to bond parts of the bags together (column 1, lines 3 – 15).

6.3.1 Concerning this known method D11 refers to the disadvantage that, following a break in the operation of the assembling device, the bonding properties of already applied layers of adhesive degrade (column 1, lines 15 – 20).

6.3.2 Based on this disadvantage, the problem is stated in D11 to improve the known method in view of a restart after a break in the operation (column 1, lines 43 – 47).

6.3.3 According to D11 this problem is solved in that the properties of the known wet synthetic resin dispersion adhesive can, to a larger or lesser extent, be re-activated by heat when they are dried out (column 1, lines 51 – 63).

6.3.4 In a more detailed manner D11 refers to the solution indicating, as stated in the annex (cf. point 10.3), "Wenn bei einer das obige Verfahren durchführenden Anlage eine Unterbrechung, wie eine Pause oder ein Stillstand über längere Zeit stattfindet, trocknen die Naßleimaufträge auf dem Ende der Packstoffbahn aus." D11 thus takes note of the fact that in case of a break over a longer time the wet adhesive already applied to blanks for bags dries out such that it loses its bonding properties (column 2, lines 27 – 37). To avoid disadvantages due to this dried out state of the adhesive D11 proposes that the adhesive be heat-reactivated (column 2, lines 38 – 50).

6.3.5 Based on this disclosure of D11 the Board concludes that in the examination of inventive step D11 is to be considered as further prior art in connection with the method of D1 as closest prior art. The reason is that D11 relates to a method of assembling bags, to parts of which as it is the case for the packets according to the method of claim 1 of the patent in suit, a layer of cold-setting adhesive is applied. Thus a problem similar to the one underlying the method of claim 1 is to be solved (cf. point 5.3 above). The solution to this problem is based, as it is the case according to

the method of claim 1, based on the utilisation of a material property of the adhesive, namely that it can be heat-reactivated after a break in operation that resulted in the adhesive already applied on portions of a blank not yet connected being in a dried out state (cf. points 6.3.3 and 6.3.4 above).

6.4 The above conclusion has been arrived at giving due consideration to the following arguments of the appellant.

6.4.1 It was argued that the skilled person would not have taken D11 into account since claim 1 of the patent in suit concerns a method for assembling packets for tobacco products from which the method according to D11 differs with respect to the type of containment to be manufactured. Claim 1 relates to packets and D11 relates to bags. Also the speed with which the packets is assembled is different. In this respect the Board is of the opinion that, as indicated during the oral proceedings, the conventional method of D1 is the closest prior art which already discloses a method corresponding to the one of claim 1; besides referring to tobacco products, claim 1 does not comprise any further features which relate to these packets or the speed in which they are assembled. Moreover, as likewise indicated by the Board during the oral proceedings, it needs to be taken into account that the method of D11 clearly relates to the problem also underlying the method of claim 1 of the patent in suit and that the basis for the solution to this problem, namely the bonding property of the adhesive, which can be heat-reactivated, is likewise clearly identified in D11.

Additionally it can be expected of the skilled person to look in the neighboring technical fields for solutions to this problem.

Finally, as can be derived from the following, it is evident that the adhesive according to D11 can be used without any modification being necessary, in the method of the closest prior art.

6.4.2 Concerning the argument that with respect to the heat-reactivation of the adhesive further parameters like e.g. the temperature of the environment and its humidity need to be taken into account the Board is, as indicated during the oral proceedings, of the opinion that such parameters need not be considered, already for the reason that none of such is referred to in claim 1 nor in the further disclosure of the patent in suit. In this respect it is, as also indicated during the oral proceedings, noted that in the patent in suit the mentioned material properties for the adhesive are only its degradation and loss of bonding properties as well as its capacity to be heat-reactivated.

7. *Disclosure of D11*

7.1 As indicated by the Board during the oral proceedings and as can be derived from the above, D11 discloses a method of assembling paper bags comprising, with respect to the adhesive used and with respect to its heat-reactivation after a break in the operation, the following features.

7.2 The method includes at least one step of reactivating the cold-setting adhesive applied to the predetermined areas, by exposing the selfsame areas to heat, at a predetermined reactivation temperature, as defined by

feature (a) (see point 5.1); cf. D11, column 2, lines 38 – 50.

7.3 The heat-reactivation step is, as defined by feature (b), initiated following a break in the operation of the packaging machine lasting for a predetermined interval of time. Contrary to the allegation of the appellant and in line with the argumentation of the respondent it is clearly disclosed in D11 that reactivation occurs after a break of a certain duration in time, namely one at which the adhesive applied is dried out and has lost its bonding property (cf. D11, column 2, lines 27 – 37, column 3, lines 5 - 7).

7.4 It is in the following, to the advantage of the appellant and in line with part of its main argumentation concerning the disclosure of D11, assumed that features (c) to (h) are not disclosed in D11. This concerns the time measurement of the duration of a break in operation and the comparison of the thus measured time value T with the aim to determine whether this time is shorter than a predetermined time interval ranging from a lower time value T1 to a larger time value T2, lies within the time interval or is larger than the time interval. This is done in order to decide whether heat-reactivation is not necessary (T smaller than T1), whether it is necessary and feasible (T larger than T1 but smaller than T2) and whether it is in vain (T larger than T2).

7.5 The Board however is, as indicated during the oral proceedings, unable to follow the remaining part of this main argument that D11 measures directly the state itself, i.e. the dried out condition of the adhesive, instead of measuring the time as an indicator for the

state of the adhesive applied after a break in the operation occurred.

7.5.1 One reason is that, questioned by the Board during the oral proceedings, the appellant was unable to refer to a specific disclosure of D11 in this respect.

7.5.2 A further, not less important reason is that the skilled person at least derives from D11 that the state of the adhesive applied depends on the duration of the break in operation and thus on the length of time. This can, as already indicated in the annex (cf. points 10.3 and 10.3.1), be immediately derived from the wording of D11 which refers to a break having a duration, i.e. over a certain time, such that the adhesive applied already dries out (column 2, lines 27 – 30). Contrary to a respective allegation of the appellant (which has not been supported by any facts) this can additionally also be directly derived from the solution of D11 according to its claim 1. There it is referred to a break of a duration such that adhesive already applied dries out (cf. column 3, lines 5 – 7).

7.6 The Board thus considers that in line with features (a) to (c) of claim 1 of the patent in suit (cf. point 5.1 above) the person skilled in the art derives, within the framework of regular design practice and thus without inventive considerations being required, from the direct disclosure of D11 that the parameter clearly disclosed as an indicator for a certain state of the adhesive concerns the duration of a break as an indicator for the dried out state. This is not, as referred to by the appellant, an otherwise not further used or superfluous information. Quite to the contrary, the skilled person reading D11 will, in an attempt to understand how the teaching of D11 can be put into

practice, immediately realise that the disclosed relationship between the time passed after an application of adhesive and the state of this adhesive can be used to assess the state of the adhesive, simply by measuring the time passed. This holds true all the more considering that, as indicated above (cf. point 7.5.1 above), D11 does not comprise information on how the dried out state of the adhesive can be measured, even though it **needs to be assessed** according to the teaching of D11.

7.6.1 Concerning the heat-reactivation of an adhesive it can thus be derived from D11 that no heat-reactivation occurs in case the time for the duration of the break, which can be called T, is smaller than a predetermined value T1, since for such a time the bonding property has not degraded to such an extent that reactivation is necessary. Likewise it can be derived that heat-reactivation is necessary in case the duration T of the break is longer than the predetermined time T1. This can be derived from the disclosures of D11 which, as indicated above, relate to a certain duration of a break to the necessity to heat-reactivate the adhesive (cf. column 2, lines 27 – 45: "Wenn ... eine Unterbrechung ... über längere Zeit stattfindet, trocknen die Naßleimaufträge auf dem Ende der Packstoffbahn aus. ... Um auch diese Zuschnitte mit ausgetrocknetem Leimauftrag zu Beuteln verarbeiten zu können, wird beim Verpressen ... der Längsnaht und dem Boden Wärme zugeführt. Unter der Einwirkung der Wärme wird der ausgetrocknete Leim ... reaktiviert." and column 3, lines 5 – 13: „... nach einer Betriebspause, während der die ... Naßleimaufträge ausgetrocknet sind ... überlappende Endbereiche des Zuschnitts und die einander überdeckenden Bereich des Bodens des

Verpackungsbehälters unter Zuführung von Wärme verpreßt werden.").

8. *Obviousness*

8.1 The appellant argued in a general manner and without reference to particular aspects of the impugned decision that the latter had not followed the problem-solution-approach and thus an *ex-post facto* analysis had been made.

8.2 In line with the annex (cf. point 11.2) and as referred to during the oral proceedings the Board cannot conclude that the examination of inventive step of the subject-matter of claim 1 according to the impugned decision does not result from a proper application of the problem-solution-approach.

8.3 As indicated in the annex (cf. point 11.3) application of the problem-solution-approach requires that the features distinguishing the method of claim 1 over the method of the closest prior art as mentioned in D1 are established, that the effect(s) of these features are determined and that starting therefrom the objective technical problem to be solved is formulated.

8.3.1 Starting from the method of the closest prior art D1 (cf. point 4.3) above and attempting to solve the objective technical problem (cf. point 5.3 above) based on the effects of the distinguishing features (cf. point 5.2 above) the skilled person considering D11 as further prior art (cf. point 6.3.5 above) immediately recognises that D11 concerns an identical problem of reducing disadvantages due to the degradation of the bonding properties of adhesives resulting from a break in the operation after the application of the adhesive.

8.3.2 Integration of the heat-reactivation step of D11 into the conventional method of D1, which can be performed within the framework of regular design practice since it does not require substantial modification either on the side of the method of D1 or on the side of the heat-reactivation step known from D11, therefore requires no inventive skills.

This applies irrespective of the argumentation of the appellant based on differences between the methods of D1 and D11 for the reasons given above (point 6.4).

8.4 The method of claim 1 of the patent in suit is distinguished from the method resulting from the combined consideration of the method of D1 and the heat-reactivation step of D11 as referred to above by feature (f) according to which a second predetermined value T2 is to be considered and the part of feature (h) implying that the heat reactivation step does not initiate when the stoppage time (T) exceeds that second predetermined critical time value T2 (cf. point 5.1 above).

8.4.1 The effect of the measure resulting from features (f) and (h) results in a constraint imposed on the objective technical problem, namely that the heat-reactivation step is only performed when it is useful (heat-reactivation step no longer performed after a duration of a break T exceeding a predetermined time T2 which indicates that the adhesive will have deteriorated beyond recovery, so that the heat-reactivation step is no longer of any use – cf. point 5.3 above and patent in suit, paragraph [0027]).

8.4.2 According to the appellant such a constraint is not derivable from D11 or any other available prior art. Consequently feature (f) and the part of feature (h) referred to above should lead, in combination with the remaining features of claim 1, to the conclusion that the method of this claim involves inventive step.

8.4.3 The Board, in line with the argumentation of the respondent, does not see any justification for this assessment of inventive step.

In the examination of whether feature (f) and the part of feature (h) can lead to the subject-matter of claim 1 involving inventive step, again, as it was the case for the remainder of the distinguishing features over the method of D1, their effect needs to be taken into consideration. Then the question needs to be answered whether the solution to the technical problem resulting from this effect is obvious in view of the available prior art or not.

The technical problem solved by features (f) and (h) resides, as indicated above, in the constraint imposed on the technical problem solved by the remainder of the distinguishing features, i.e. to devise a heat-reactivation step according to which disadvantages arising from the bonding properties of the adhesive degrading due to a break in production can be minimized under the condition that the heat-reactivation step is only performed when it is useful (cf. point 8.4.1).

Although such a constraint is not mentioned in D11 it comes, as pointed out by the respondent, within regular design practice that measures, like presently the heat-reactivation step as known from D11, will normally only be carried out when it makes technical sense.

8.4.4 For the application of the heat-reactivation step of D11 two constraints are apparent to the skilled person. The first one, which is referred to in D11, concerns short breaks and imposes that heat-reactivation is only performed after a break of a longer duration has occurred (cf. point 5.3 above). The second one based on the effect of features (h) and (f) imposes that the heat-reactivation step will not be performed in case it is anyway in vain (cf. also the annex, point 11.1).

In case the second constraint is of practical concern, it is evident that the skilled person realises its limiting effect on the heat-reactivation step and will thus not unnecessarily perform such a step. This is irrespective of the doubts expressed in this connection by the respondent who argued that such a constraint largely depends on the change of bonding properties over time passing for which no disclosure is given in the patent in suit. Moreover, no evidence supporting its opposite view has been relied upon by the appellant.

8.5 It is therefore, as indicated during the oral proceedings, concluded that the method of claim 1 does not involve inventive step (Article 56 EPC) in view of the conventional method of D1 combined with the teaching of the heat-reactivation step of D11 within the framework of regular design practice.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall H. Meinders

Decision electronically authenticated