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**Datasheet for the decision  
of 27 July 2010**

**Case Number:** T 0860/08 - 3.2.05

**Application Number:** 99202615.3

**Publication Number:** 0979723

**IPC:** B29C 65/02

**Language of the proceedings:** EN

**Title of invention:**  
Heat-sealing apparatus

**Patentee:**  
Shikoku Kakoki Co., Ltd.

**Opponent:**  
AB Tetra Pak

**Headword:**

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**Relevant legal provisions:**  
EPC Art. 111(1), 123(2)(3)  
RPBA Art. 13

**Relevant legal provisions (EPC 1973):**

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**Keyword:**

"Added subject-matter (main request and auxiliary requests 1 to 5, yes - auxiliary request 6, no)"

"Admissibility of auxiliary request 6 (yes)"

"Extension of the scope of protection (auxiliary request 6, no)"

"Referral to Enlarged Board (no)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0860/08 - 3.2.05

**DECISION**  
of the Technical Board of Appeal 3.2.05  
of 27 July 2010

**Appellant:** Shikoku Kakoki Co., Ltd.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 18 February 2008  
revoking European patent No. 0979723 pursuant  
to Article 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** P. Michel  
**Members:** S. Bridge  
E. Lachacinski

## Summary of Facts and Submissions

- I. The appellant (patent proprietor) lodged an appeal against the decision of the Opposition Division revoking European patent No. 0 979 723 for reasons of added subject-matter (Article 123(2) EPC).

An opposition was filed against the patent as a whole based on Article 100(a) EPC (lack of novelty, Article 54 EPC, and lack of inventive step, Article 56 EPC), Article 100(b) EPC (Article 83 EPC) and Article 100(c) EPC (Article 123(2) EPC).

- II. Oral proceedings were held before the Board of Appeal on 27 July 2010.

- III. The appellant requested that the decision under appeal be set aside and that the case be remitted to the opposition division for further processing on the basis of the claims as granted as main request, or on the basis of the sets of claims filed as auxiliary requests 1 to 16 on 24 June 2010. In addition, it is requested that the three questions as set out in a letter dated 24 June 2010 be submitted to the Enlarged Board of Appeal.

The respondent (opponent) requested that the appeal be dismissed.

- IV. Claim 1 as granted (main request) reads as follows:

"1. A heat-sealing apparatus for forming a packing material made of a laminate including a synthetic resin layer into a tubular-shape, and transversely heat-

sealing the tubular packing material by using a pair of open-and-closable pressing members having a heating mechanism, wherein a groove is disposed on at least one action face of the pressing members, capable of forming a synthetic resin bulge characterized in that the packing material is heated with a fluid and in that the resin bulge is adjacent to the outer side of a zone to be sealed on a container's interior side".

Claim 1 according to auxiliary request 1 differs from claim 1 of the main request in that the word "therein" is inserted after "the packing material is heated with a fluid".

Claim 1 according to auxiliary request 2 differs from claim 1 of the main request in that the term "heated" in the feature "the packing material is heated with a fluid" is replaced by "heat-sealed".

Claim 1 according to auxiliary request 3 differs from claim 1 of the main request in that the expression "by the pressing members" is inserted after "the packing material is heated with a fluid".

Claim 1 according to auxiliary request 4 differs from claim 1 of the main request in that the term "fluid" in the feature "the packing material is heated with a fluid" is replaced by "liquid beverage".

Claim 1 according to auxiliary request 5 differs from claim 1 of the main request in that the feature "the packing material is heated with a fluid" is replaced by "the packing material is heated by molten resin of the synthetic resin layer".

Claim 1 according to auxiliary request 6 differs from claim 1 of the main request in that the following additional text is added to the end of the claim:  
"wherein the phrase ''packing material is heated with a fluid'' means heating the packing material filled with fluid".

V. The following document is referred to in the present decision:

D8: US-A-3,980,515

VI. The arguments of the appellant in the written and oral proceedings can be summarised as follows:

*Main Request*

In claim 1 (main request) the phrase "the packing material is heated with a fluid" does not use the word "by" but uses the word "with". This indicates that "the fluid" is not part of the passive statement "the packing material is heated". For the skilled person this phrase means that the packing material is heated together with fluid contained therein. Any other interpretation would be illogical both on the basis of the skilled person's technical knowledge and in view of the preferred embodiment of the patent in suit in which the packing material contains a liquid.

Document D8 on its own does not prove that heating by means of a fluid is customary for the skilled person.

Had heating by means of a fluid been intended, different wording would have been used.

Therefore, heating by means of a fluid is not part of the subject-matter of claim 1 (main request).

In consequence, the subject-matter of claim 1 (main request) satisfies the requirements of Article 123(2) EPC.

#### *Auxiliary Requests 1 to 5*

The amendments made to respective claims 1 of the auxiliary requests 1 to 5 are intended make clear that the fluid is contained in the packing material. Otherwise, the same arguments apply as for the main request.

Therefore, the subject-matter of claim 1 (auxiliary requests 1 to 5) satisfies the requirements of Article 123(2) EPC.

#### *Auxiliary Request 6*

Auxiliary request 6, which was filed in response to the preliminary opinion of the Board one month before the oral proceedings, does not introduce any new features and is therefore to be admitted into the proceedings.

Claim 1 according to auxiliary request 6 prevents the phrase "the packing material is heated with a fluid" from being construed as heating by means of a fluid.

Therefore, the subject-matter of claim 1 (auxiliary request 6) satisfies the requirements of Article 123(2) and (3) EPC.

*Referral to the Enlarged Board of Appeal*

If the Board were to decide that none of the requests meet the requirements of Article 123(2) EPC, then the three questions set out in the letter dated 24 June 2010 are to be submitted to the Enlarged Board of Appeal.

VII. The arguments of the respondent in the written and oral proceedings can be summarised as follows:

*Main Request*

The phrase "the packing material is heated with a fluid" in claim 1 (main request) can only mean that the packing material is heated by means of a fluid. The skilled person would not consider any other reading of claim 1, because this interpretation already makes technical sense on the basis of the wording of the claim alone. Heating by means of a fluid is known from prior art document D8 but was not disclosed in the application as filed.

Therefore, the subject-matter of claim 1 (main request) does not satisfy the requirements of Article 123(2) EPC.



*Auxiliary Requests 1 to 5*

The amendments made to respective claims 1 according to auxiliary requests 1 to 5 do not overcome the arguments already presented in the context of the main request.

Therefore, the subject-matter of claim 1 (auxiliary requests 1 to 5) does not satisfy the requirements of Article 123(2) EPC.

*Auxiliary Request 6*

Auxiliary request 6 is late filed, complex and could already have been filed before the first instance and is therefore not to be admitted into the proceedings at this late stage.

Claim 1 according to auxiliary request 6 is no longer limited to heating by means of fluid. The scope of protection is thereby extended beyond that of claim 1 as granted, contrary to Article 123(3) EPC.

**Reasons for the Decision**

1. *Main Request*

1.1 The following two interpretations may be placed on the contested feature of claim 1, "the packing material is heated with a fluid":

- (1) the fluid is inside the packing material when the latter is heated - i.e. "with a fluid" is considered as an attribute of "the packing

material". The appellant considers this to be the only possible interpretation.

(2) the fluid constitutes the means of heating the packing material - i.e. "with a fluid" is considered as an attribute of the verb "is heated". The respondent considers this to be the only possible interpretation.

1.2 Both interpretations make technical sense: heat sealing a tubular packaging for liquids by means of hot air is known from the prior art (see document D8, column 1, lines 1 to 15 and 46 to 52; column 2, lines 25 to 40 and 64 to 66) while prior art for heat sealing a package while it contains a liquid is reviewed in the introductory part of the description of the patent in suit (see published version, paragraphs [0007] and [0008]).

Furthermore, interpretation (1) - heat sealing a packing material while it contains a fluid - is explicitly supported by the description of the embodiment of the patent in suit (published version, paragraphs [0019] and [0022]).

Insofar as interpretation (2) is concerned, the description of the invention in the patent in suit includes a generic "heating mechanism" (published version, paragraph [0017]) and provides examples in terms of "high frequency, impulses and ultrasonic waves" (published version, paragraph [0018]). Although the embodiment of the invention in the patent in suit involves the use of a high frequency coil for heating the packing material, claim 1 as granted is not worded

in terms of such a specific feature. The scope of claim 1 is therefore not restricted to heating by means of a high frequency coil. Furthermore, there are no statements in the description excluding other heating means. Therefore, the patent in suit does not comprise any statement which would rule out interpretation (2).

The argument advanced on behalf of the appellant that heat sealing by means of a (hot) fluid does not correspond to the usual practice of the skilled person was not substantiated. Mere reference to the age of document D8 (published in 1976) does not on its own constitute a valid reason for its teaching to be disregarded by the skilled person. The apparatus disclosed in document D8 (column 2, lines 25 to 66; column 4, lines 29 to 32, figures 1 to 7) provides sufficient proof that "heat sealing by means of a (hot) fluid" is neither illogical nor necessarily erroneous.

Therefore, the appellant's position that claim 1 is only to be understood in terms of interpretation (1) - heat sealing a packing material while it contains a fluid - is too narrow. Interpretation (2) is equally valid as it makes technical sense and is neither illogical nor contradicted by the patent in suit.

Similarly, the respondent's position that the feature "the packing material is heated with a fluid" (claim 1 as granted) is only to be interpreted in terms of the fluid being the means of heating the packing material is too narrow, because the term "with" also denotes association and thereby includes interpretation (1).

The Board cannot accept that the skilled person would not also consider interpretation (1) when reading claim 1, simply because the interpretation (2) already makes technical sense on the basis of the wording of the claim alone. The Board is of the opinion that the skilled person interested in the subject-matter of claim 1 also consults the patent in suit as a whole, i.e. including the description of the embodiment, which, as already noted above, provides explicit support for interpretation (1) (see published version of the patent in suit, paragraphs [0002], [0010], [0019] and [0022]).

In consequence, the subject-matter for which protection is sought in claim 1 as granted, even when interpreted in accordance with the description (Article 69(1) EPC), encompasses both interpretations (1) and (2).

### 1.3 Article 123(2) EPC

The application documents as filed do not disclose the use of a fluid as a means of heating the packing material although this possibility is included in the subject-matter of claim 1 as granted (main request).

The subject-matter of claim 1 as granted (main request) therefore contains added subject-matter contrary to Article 123(2) EPC.

## 2. *Auxiliary Requests 1 to 4*

2.1 According to auxiliary request 1, the contested feature of claim 1 as granted is amended through the addition

of the word "therein" to read "the packing material is heated with a fluid therein".

Document D8 (column 2, lines 25 to 34) already discloses that hot air is blown onto the sealable plastics coating of the spread apart free edges. After heating with air, these edges are pressed rapidly onto each other for the softened areas to form a sealed seam (column 2, lines 64 to 66). In consequence, it is known from document D8 that hot air is applied to the inside of the packaging material.

- 2.2 According to auxiliary request 2, the word "heated" is replaced by "heat-sealed" in the contested feature of claim 1 as granted.

It is similarly known from document D8 (column 2, lines 25 to 34 and lines 64 to 66) that the hot air is used to form a seal.

- 2.3 According to auxiliary request 3, the expression "by the pressing members" is inserted after the contested feature of claim 1 as granted. The resulting expression "heated by a fluid with pressing members" does not define the relationship of the heating fluid and the pressing members so that the scope of such a claim is unclear (Article 84 EPC).

Furthermore, it is known from the prior art review of document D8 that hot water may be used to heat a sealing jaw (column 1, lines 16 to 21).

- 2.4 In claim 1 according to auxiliary request 4, the term "fluid" is replaced by "liquid beverage" in the contested feature of claim 1 as granted.

It is known from the prior art review of document D8 that hot water may be used to heat a sealing jaw (column 1, lines 16 to 21).

- 2.5 Therefore the respective amendments made to claim 1 (auxiliary requests 1 to 4) do not restrict the scope of the claim so as to exclude the interpretation in which the fluid constitutes the heating means for the packaging material. Furthermore, in view of the prior art, interpretation (2) - heating by means of a fluid - still make technical sense with amended claim 1 respectively according to auxiliary requests 1 to 4.

The added subject-matter objection raised against claim 1 of the main request therefore correspondingly carries over to the subject-matter of the respective claim 1 of auxiliary requests 1 to 4 (Article 123(2) EPC).

3. *Auxiliary request 5*

Claim 1 according to auxiliary request 5 differs from claim 1 as granted in that the contested feature is replaced by "the packing material is heated by molten resin of the synthetic resin layer".

The application documents as filed do not disclose or discuss any heating of the packing material by the molten resin of the synthetic resin layer. The references to the molten resin (bulge) in the

description merely refer to its position or displacement but do not - even implicitly - discuss any heating emanating from it (paragraphs [0008] to [0013], [0018], [0020], [0022], [0023], [0025] and [0030], published version of the application). Therefore, heating the packing material by means of molten resin is not immediately and unambiguously disclosed to the skilled person, so that the subject-matter of claim 1 according to auxiliary request 5 contains added subject-matter contrary to Article 123(2) EPC.

4. *Auxiliary request 6*

4.1 Admissibility of auxiliary request 6

Auxiliary request 6 was filed in response to issues raised by the Board in the annex to the summons to oral proceedings. In accordance with the indication given in the annex, the requests were filed more than one month before the date set for oral proceedings.

In the Board's judgement, the issues raised by this amendment are not so complex that the respondent could not be reasonably expected to deal with them in the one month period before the oral proceedings. Accordingly, the conditions set out in Article 13(3) of the Rules of Procedure of the Boards of Appeal (RPBA) are satisfied.

Thus, the Board is of the opinion that it is appropriate to exercise their discretion to admit the request into the procedure (Article 13 RPBA).

#### 4.2 Article 123(2) EPC

Claim 1 according to auxiliary request 6 differs from claim 1 as granted in that the following text is added to the end of the claim: "wherein the phrase 'packing material is heated with a fluid' means heating the packing material filled with fluid".

This amendment prevents the feature "the packing material is heated with a fluid" from being construed as heating by means of a fluid. The subject-matter of claim 1 (auxiliary request 6) is thereby limited to interpretation (1) - heat sealing a packing material which is filled with fluid - which, as already noted above, is explicitly supported by the description of the embodiment of the patent in suit (published version, paragraphs [0019] and [0022]).

Therefore, the subject-matter of claim 1 according to auxiliary request 6 satisfies the requirements of Article 123(2) EPC.

#### 4.3 Article 123(3) EPC

The respondent's objection under Article 123(3) EPC is based on the premise that claim 1 as granted can only be construed in the sense of the fluid being the means of heating the packing material. As was already argued above in the context of the main request, this interpretation of claim 1 as granted is too narrow.

The subject-matter for which protection is sought in claim 1 as granted also encompasses the interpretation in which the fluid is inside the packing material when



the latter is heated. As the amendment made to claim 1 according to auxiliary request 6 merely eliminates one of these interpretations without adding any additional features, the scope of protection has been reduced.

Therefore, the subject-matter of claim 1 according to auxiliary request 6 satisfies the requirements of Article 123(3) EPC.

5. *Remittal to the first instance*

Since the grounds mentioned in Article 100(a) EPC (lack of novelty, Article 54 EPC, and lack of inventive step, Article 56 EPC) and in Article 100(b) EPC (Article 83 EPC) were not examined by the Opposition Division, the Board considers it appropriate to make use of its discretionary powers under Article 111(1) EPC and remit the case to the department of first instance for further prosecution.

In consequence, the remaining requests do not fall to be considered.

6. *Referral to the Enlarged Board of Appeal*

With auxiliary request 6 satisfying the requirements of Article 123 EPC, the precondition to the appellant's conditional request to submit questions to the Enlarged Board of Appeal is not met. It is thus not necessary to consider the referral of questions to the Enlarged Board of Appeal.

**Order**

**For these reasons it is decided that:**

- I. The decision under appeal is set aside.
  
- II. The case is remitted to the department of first instance for further prosecution

The Registrar:

The Chairman:

D. Meyfarth

P. Michel