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D E C I S I O N
of 8 November 2005

Case Number: T 1006/03 - 3.3.03

Application Number: 94929438.3

Publication Number: 673397

IPC: C08L 23/04, B65D 65/40, C08J 5/18

Language of the proceedings: EN

Title of invention:
Pouches of ethylene copolymer film containing a flowable material

Patentee:
Liqui-Box Canada Inc.

Opponents:
01: The Dow Chemical Company
02: ExxonMobil Chemical Patents Inc.

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
"Amendments - added subject-matter - yes"

Decisions cited:
T 0113/86, T 0383/03

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1006/03 - 3.3.03

D E C I S I O N
of the Technical Board of Appeal 3.3.03
of 8 November 2005

Appellant: (Proprietor of the patent)	Liqui-Box Canada Inc. 201 South Blair Street Whitby Ontario L1N 5S6 (CA)
Representative:	Carpmaels & Ransford 43 Bloomsbury Square London WC1A 2RA (GB)
Respondent: (Opponent)	THE DOW CHEMICAL COMPANY 2030 Dow Center Midland Michigan 48674 (US)
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(Opponent)	ExxonMobil Chemical Patents Inc. P.O. Box 2149 Baytown Texas 77522-2149 (US)
Representative:	UEXKÜLL & STOLBERG Patentanwälte Beselerstrasse 4 D-22607 Hamburg (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 7 July 2003 revoking European patent No. 673397 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: C. Idez
Members: M. Gordon
C. Heath

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 0 673 397 in respect of European patent application No. 94929438.3 in the name of Dupont Canada Inc. was announced on 29 December 1999 (Bulletin 1999/52) on the basis of 38 claims.

Independent claims 1, 10, 23, 33 and 36 read as follows:

"1. A resin blend suitable for making film for pouches for containing a flowable material said pouches having at least two heat sealed edges, wherein said resin blend comprises a long chain branched linear polymer of ethylene and at least on C_4-C_{10} alpha-olefin manufactured in a single-site catalyst polymerisation process, and at least one polymer selected from a linear polymer of ethylene and at least one C_4-C_{10} alpha-olefin, a high pressure low density polyethylene, and blends thereof.

10. A resin blend wherein said resin blend comprises a linear polymer of ethylene and at least one C_4-C_{10} alpha-olefin manufactured in a single-site catalyst polymerisation process, and at least one of the following:

(a) a linear polymer of ethylene and at least one C_4-C_{10} alpha-olefin made by a multi-site catalyst polymerisation process; and

(b) a high pressure low density polyethylene.

23. A film for making pouches for containing a flowable material, said pouches having at least two heat sealed

transverse edges, and being formed from a resin blend as claimed in any of claims 1 to 22.

33. A process for making pouches filled with a flowable material, using a vertical form, fill and seal apparatus, in which process each pouch is made from a flat web of a film by forming a tubular film therefrom with a longitudinal seal and subsequently flattening the tubular film at a first position and transversely heat sealing said tubular film at the flattened position, filling the tubular film with a predetermined quantity of flowable material above said first position, flattening the tubular film above the predetermined quantity of flowable material at a second position and transversely heat sealing said tubular film at the second position, in which process the pouch is made from a film as claimed in any one of claims 23 to 31.

36. A process for making pouches filled with a flowable material, using a vertical form, fill and seal apparatus, in which process each pouch is made from a flat web of film by forming a tubular film therefrom with a longitudinal seal and subsequently flattening the tubular film at a first position and transversely heat sealing said tubular film at the flattened position, filling the tubular film with a predetermined quantity of flowable material above said first position, flattening the tubular film above the predetermined quantity of flowable material at a second position and transversely heat sealing said tubular film at the second position, wherein the pouch is made from a film comprising a polymer of ethylene and at

least one C_4-C_{10} alpha-olefin manufactured in a single-site catalyst polymerization process."

II. Notices of opposition were filed on 28 September 2000 by The Dow Chemical Company (OI) and on 29 September 2000 by Exxon Chemical Patents Inc, later ExxonMobil Chemical Patents Inc. Both opponents requested revocation of the patent. Opponent I invoked the grounds pursuant to Articles 100(a) and 100(c) EPC. Opponent II invoked the grounds pursuant to Articles 100(a) and (b) EPC.

III. By its decision announced orally on 30 April 2003 and issued in writing on 7 July 2003, the Opposition division revoked the patent.

(a) The decision was based on a main and two auxiliary requests, each consisting of 8 claims.

Claim 1 of the main request read as follows:

"1. A process for making pouches filled with a flowable material, using a vertical form, fill and seal apparatus, in which process each pouch is made from a flat web of film by forming a tubular film therefrom with a longitudinal seal and subsequently flattening the tubular film at a first position and transversely heat sealing said tubular film at the flattened position, filling the tubular film with a predetermined quantity of flowable material above said first position, flattening the tubular film above the predetermined quantity of flowable material at a second position and transversely heat sealing said

tubular film at the second position, wherein the vertical form, fill and seal apparatus includes impulse sealing means and the said steps of transversely heat sealing are carried out by impulse sealing, and wherein the flat web of film comprises:

from 10 to 100 parts by weight of a polymer of ethylene and at least one C_4-C_{10} alpha-olefin manufactured in a single-site catalyst polymerization process; and

from 0 to 90 parts by weight of at least one polymer selected from a linear polymer of ethylene and at least one C_4-C_{10} alpha-olefin made by a multi-site catalyst polymerisation process and having a density of from 0.912 to 0.930 g/cm^3 and a melt index of from 0.3 to 2.0 dg/min, a high pressure low density polyethylene having a density of from 0.916 to 0.930 g/cm^3 and a melt index of from 1 to 10 dg/min, and blends thereof."

Claim 1 of the first auxiliary request was amended compared to claim 1 of the main request by specifying that the pouches were filled with a liquid, emulsion or paste.

Claim 1 of the second auxiliary request was amended compared to the claim 1 of the main request by replacing the wording "and the said steps of transversely sealing are carried out by impulse sealing" by the phrase "to seal the pouch".

(b) With regard to the main request, concerning the feature "wherein the vertical form, fill and seal apparatus includes impulse sealing means and the said steps of transversely heat sealing are carried out by impulse sealing", the Opposition Division noted that the application as filed made various references to specific apparatus containing an impulse sealing device. In particular, the opposition division noted that:

(i) in the discussion of the prior art the application as originally filed disclosed that a commonly used sealing device was an impulse sealer;

(ii) the application as filed also taught that sealing may be carried out using any other suitable heat sealing apparatus;

(iii) in the examples the use of impulse sealing to form the longitudinal and transverse seals was described only in relation to the use of a specific machine ("Prepac® IS-6").

Hence the definition of impulse sealing in the claim was held to constitute an inadmissible generalisation.

(c) It was further held that the upper limit of the density defined in the claims, namely 0.930 g/cm^3 represented an inadmissible amendment of the originally disclosed figure of 0.93 g/cm^3, i.e. to two decimal places.

(d) Further, claim 1 of the main request omitted the term "linear" whereas the claims as granted stipulated that the ethylene based polymer manufactured by use of a single site polymerization catalyst was linear. Claim 1 of the main request also permitted from 0 to 90 parts by weight of an ethylene based copolymer whereas the claims as granted did not define a range having a lower limit of 0.

(e) Auxiliary request 1, amended by specifying that the pouches were filled with a liquid, emulsion or paste, and auxiliary request 2 in which the wording "to seal the pouch" replaced the passage "and the said steps…..impulse sealing" were considered to be subject to the same objections as the main request.

Thus the opposition division came to the conclusion that the claims according to the main request and first and second auxiliary requests did not meet the requirements of Article 123(2) EPC.

Hence the patent was revoked.

IV. A notice of appeal was filed against this decision on 10 September 2003, the appeal fee being paid on the same date.

(a) Together with the statement of Grounds of Appeal, filed on 4 November 2003, the Appellant filed 4 sets of claims as a main and 1st-3rd auxiliary requests. Claim 1 of the main request had been amended, compared to the main request considered

by the opposition division by replacing the phrase "wherein the vertical form, fill and seal apparatus includes impulse sealing means and the said steps of transversely heat sealing are carried out by impulse sealing" by the phrase "wherein the said steps of transversely heat sealing are carried out by impulse sealing with an impulse sealing device". Claim 1 of the first auxiliary request corresponded to that of the main request, with the difference that the upper limit of the density ranges were specified to two significant figures (0.93 instead of 0.930 g/cm^3). The second and third auxiliary requests corresponded to the main and second auxiliary requests considered by the opposition division.

(b) With regard to the feature of impulse sealing, the Appellant argued that the application as filed did provide a generic disclosure of transverse impulse sealing in vertical form, fill and seal (VFFS) equipment. The reference to impulse sealing at page 2, line 20 was unambiguously linked to the methods of the invention through the use of the term "vertical form, fill and seal".

Regarding the finding of the opposition division that the application as filed only taught the use of impulse sealing with the Prepac® IS-6 or IS-7 apparatus, but not with any kind of VFFS equipment, it was submitted that the use of the wording "such as" in the discussion of the Prepac® VFFS apparatus at page 7, lines 32 to 34 of the application as filed unambiguously indicated that other suitable impulse sealed VFFS equipment, as

described on pages 1 and 2 of the application as filed could be employed.

With regard to the disclosure of the possibility of using other methods of transverse sealing apart from impulse sealing, it was submitted that this did not mean that the limitation to impulse sealing in the claims constituted added subject matter.

Further, the technical problem and solution addressed in the patent in suit related specifically to impulse sealing, reference being made to the passage at page 3, lines 6-12 which stated that pouches made from known films tended to have weak transverse and/or longitudinal seals, leading to leakage ("leakers") despite optimisation of the operating conditions of the impulse sealer. Hence the technical problem underlying the patent in suit was defined with reference to impulse sealing and it followed that the solution taught would be particularly applicable to impulse sealing. This position was supported by reference to the statement at page 3, lines 22-25 focussing on further improvements in leaker performance.

It was considered permissible to surrender part of the subject matter originally granted in order to address objections raised in the opposition. The limitation to impulse sealing was allowable since this was the main process described and exemplified in the patent in suit.

(c) Regarding the definition of the upper limit of the density of the two polymers as 0.930 g/cm^3, it was disputed that any case law prohibited such an amendment. It was considered that the technical teaching of the so amended claims did not differ from that of the application as filed in this respect. The application as filed defined the upper limit as 0.93 exactly, which was synonymous with 0.930 or 0.9300. If anything else had been intended, e.g. 0.934 then the application would have specified the upper limit accordingly.

(d) With regard to the specification of "linear", it was submitted that claim 1 of all requests was based on claim 36 as granted which did not contain such an limitation, and thus that the requirement of Art. 123(3) were met.

(e) Similarly, the definition of the range of from 0 to 90 parts by weight of an ethylene based copolymer made by a multisite catalyst polymerisation process was permissible pursuant to Article 123(3) EPC since there was no restriction in this respect in claim 36 as granted. This feature also met the requirements of Article 123(2) EPC as it had been disclosed in the application as filed at page 5, line 16.

V. With a letter dated 12 December 2003, the assignment of the patent in suit to Liqui-Box Canada Inc, was notified, supporting documentation being provided.

VI. In submissions dated 14 May 2004 and 16 July 2004 respectively Respondent I (opponent I) and Respondent II (opponent II) concurred with the findings of the decision under appeal.

(a) With regard to the feature of impulse sealing, it was argued that the application as filed did not provide support for generalisation of specific, not explicitly mentioned features of the Prepac® IS-6 and IS-7 machines. There was no direct, unambiguous teaching either of the use of VFFS machines having an impulse sealer, or of an impulse sealer for transversely heat sealing. The discussion of VFFS machines in the application as originally filed, (page 1, line 16 to page 2, line 16) related to the background art and was not linked to the passage at page 7, lines 32-34. In any case this passage taught that any kind of sealing apparatus could be used. As had been confirmed by the technical expert at the oral proceedings before the opposition division, it was possible that apparatus other than the PrePac® IS-6 employed different sealing methods for both the longitudinal and transverse sealing. The wording "such an apparatus" at lines 18 and 19 of page 1 could refer back both to "pouch-forming apparatus" and "vertical form, fill and seal apparatus". Also the application as filed explicitly taught that variations on pouch-forming machines were available. The mention of impulse sealing at page 2, lines 20-34 referred to the background art, and did not state that all VFFS machines had impulse sealers. There was also an explicit statement (page 2, lines 32-33) that sealing may

be carried out using any other suitable heat-sealing apparatus. Regarding the submissions relating to the passage at page 3, lines 6-12, it was submitted that this taught that even in the case of optimum impulse sealer operating conditions, leakers may still occur with prior art resins. This showed that impulse sealing itself did not contribute to the prevention of leakers and hence could not be a key aspect of the invention. There was no statement to relate improved leaker performance specifically to the transverse seal, since "leakers" could result from either of the seals. In the further discussion (page 8, lines 21-23) leaker performance was said to be affected by the film thickness and material, transverse sealing method not being mentioned in this context. Also the application as filed was not limited to VFFS apparatus.

(b) Objections to the amounts of the two polymers present, and the properties of the two polymers, in particular the upper limit of the density and the defined combination of density and melt index as advanced during the opposition procedure were maintained (cf paragraphs IV(c)-(e) above).

VII. Oral Proceedings before the Board took place on 8 November 2005.

(a) With regard to impulse sealing, the Appellant submitted that claim 37 of the application as filed disclosed a process employing a vertical form, fill and seal apparatus, which was defined at page 1 from line 16 of the application as

filed. Attention was drawn to the statements at page 1 line 26 relating to transverse sealing and at page 2, lines 20-21 that a commonly used sealing device was an impulse sealer. Thus impulse sealing was disclosed in general terms, in connection with VFFS apparatus and for forming the transverse seal.

Impulse sealing was not disclosed only in the context of the PrePac® IS-6 and IS-7 machines, these simply being examples of usable equipment as shown by the wording at page 2, line 17 and page 7 line 33.

The application as filed was not limited to impulse sealing, but there was a basis for such limitation since all the data and examples related to impulse sealing. The teaching of other heat sealing methods was speculative. To exclude other methods defined only in a cursory way did not extend the teaching.

The reference to "a sealing device commonly used" at page 2, line 20 related to the discussion of forming the transverse seal at page 1, lines 26 and 27, and constituted an elucidation of "the sealing device" referred to at page 1. Longitudinal sealing had not been linked to any specific device.

The discussion of the problem at page 3, line 6 related clearly to impulse sealing. Impulse sealing was the only technique described in any

detail hence inevitably impulse sealing was generically disclosed.

The limitation had been introduced in order to obtain conformity with the teaching of the priority document, it was not intended to create a new invention.

(b) The Respondents considered that the disclosure starting at page 3, line 6 of the application as filed that pouches were defective even though impulse sealing had been optimized and that this defect could be overcome by employing a specific film showed that the invention of the patent in suit was considered to reside in a specific film, not in the sealing method. The feature of impulse sealing was added to the claims in order to overcome objections pursuant to Articles 54 and 56 EPC thus shifting the focus to the use of impulse sealing for forming the transverse seal. There was no support for this in the application as filed.

The discussion at pages 1 and 2 showed that various types of apparatus, not only impulse sealers were contemplated. It was disputed that the passages on pages 1 and 2 were linked in the manner proposed by the Patentee.

The discussion of "leakers" at page 3 was linked to the material, not to impulse sealing.

The application as filed also did not require the use of VFFS apparatus, rather the invention was related to the film, any kind of sealer being usable.

VIII. The final requests of the parties were:

Appellant (Patentee): that the decision under appeal be set aside and that the case be remitted to the opposition division for consideration of the remaining grounds of opposition on the basis of the claims as amended in the main request alternatively on the basis of the claims as amended in any one of the auxiliary requests 1 to 3.

Respondents I and II (Opponents I and II): that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. The decision under appeal held that the claims under consideration according to all requests did not comply with the requirements of Article 123(2) EPC.

2.1 Principal among the considerations in this respect was the issue whether the incorporation of the feature relating to "impulse sealing" in claim 1 of all requests, i.e. "wherein the said steps of transversely heat sealing are carried out by impulse sealing with an impulse sealing device" (main request, first auxiliary request), "wherein the vertical form, fill and seal

apparatus includes impulse sealing means and the said steps of transversely heat sealing are carried out by impulse sealing" (second auxiliary request), and "wherein the vertical form, fill and seal apparatus includes impulse sealing means to seal the pouch" (third auxiliary request) represents an allowable amendment pursuant to the requirements of said article.

2.2 According to the established case law of the Boards of Appeal, the appropriate standard for deciding the admissibility of amendments is a strict one, namely "beyond all reasonable doubt" (T 383/88, Reasons 2.2.2, 1 December 1992, not published in the OJ EPO). This means that an amendment must be deemed inadmissible if there was the slightest doubt that the unamended patent could be construed differently to the patent as amended (T 113/86, 28 October 1987, not published in the OJ EPO cited in the aforementioned T 383/88).

2.3 Common to all requests is that a certain set of process steps, corresponding to vertical form, fill and sealing is defined in combination with a specific method for effecting the seals, namely impulse sealing. According to the main request and the first and second auxiliary requests, this sealing method is employed for the transverse seals. According to the third auxiliary request, the VFFS apparatus includes impulse sealing means for sealing the pouch, no restriction being placed on the type of seal (transverse or longitudinal) realised by this method.

The disclosure of the application as filed

3. *The Claims*

Claim 37 of the application as originally filed (corresponding to claim 36 as granted) defines a process for making pouches, in which the transverse seals are realised by heat sealing. The manner in which the heat sealing is accomplished is specified neither in this claim, nor in any other of the claims as originally filed.

4. *The description*

4.1 The description of the application as filed discusses on the one hand the different types of pouch-forming apparatus applicable, and on the other the applicable sealing techniques.

4.1.1 In the passage from page 1, line 16 to page 2, line 16, the packaging of flowable materials on a pouch-forming apparatus is discussed. Vertical form, fill and seal equipment is mentioned as an example of pouch-forming apparatus. It is disclosed that in one possible process, two sealing steps are required. The longitudinal edges are sealed to form a tube, then by means of a transverse heat seal the tube is sealed at the lower end, the material being packaged enters the tube and a further transverse heat seal is made, thus sealing the tube at the top end, simultaneously with severing the pouch so formed. This section of the application as filed makes reference to the jaws of the sealing device but does not discuss the manner in which the sealing device operates. It is explicitly stated at page 2,

line 6 that variations on the pouch-forming machine and the type of VFFS apparatus are "either known or conceivable". In particular, it is stated that the forming and sealing functions may be performed separately from the severing step on separate machines. The final part of this paragraph discloses that an alternative process for making pouches may be employed in which two pieces of film are made into a pouch by forming four seals (two longitudinal, two transverse). It is not stated by which method the seals would be made when preparing the pouches by this method.

4.1.2 In the passage from lines 20 to 33 on page 2 of the application as originally filed, sealing techniques are discussed. In that respect it is mentioned at page 2, lines 20 and 21 that "A sealing device commonly used is a so-called impulse sealer", and the function of said device is explained. It is not stated that this is the sole method of sealing envisaged, or even that it represents the preferred sealing method. The use of the indefinite article and the absence of a specific reference to any of the particular type of pouch-forming apparatus discussed in the preceding paragraphs of the application means that, contrary to the submission of the Appellant (Section IV.b above), it is not correct to construe this sentence as providing an elucidation specifically of the "sealing device" referred to at page 1, lines 25-26 in the context of the discussion of the pouch-forming process on a vertical form, fill and seal apparatus.

The final sentence of this paragraph (page 2, lines 32 and 33) in any case explicitly states that sealing may be carried out by other suitable heat-sealing

apparatus, hence confirming that impulse sealing is not inevitably and necessarily to be employed.

4.1.3 Hence in view of the several pouch forming methods (see paragraph 4.1.1) and the several sealing methods (see paragraph 4.1.2) disclosed in the application as filed, there is no generic disclosure either that, regardless of the pouch-forming process adopted, inevitably impulse sealing must be employed, or that in the more restricted case of employing a vertical form, fill and seal apparatus necessarily and exclusively impulse sealing means is to be employed.

4.2 The application as filed does, in addition to the general discussion indicated in paragraph 4.1 above, refer to certain specific VFFS machines as examples of the "any apparatus" permissible. Reference is made at page 2, lines 17-19 and at page 7 lines 32-34 to VFFS machines identified by the names "Prepac® IS-6" and "Prepac® IS-7".

4.2.1 No further details of these devices are given. In particular, the type of sealing means employed is not disclosed. It is however noted that, as submitted by the technical expert Mr. Breck at the oral proceedings before the opposition division, and stated in the decision under appeal (page 5, first section) the Prepac® IS-6 machine does employ impulse sealing means. This statement has not been disputed in these proceedings; on the contrary, Respondent II has explicitly endorsed this (rejoinder to the statement of grounds of appeal, section 1.1). Accordingly, the Board accepts that the Prepac® IS-6 machine does in fact employ impulse sealing.

However, this is a highly specific example, relating to a single commercially available machine and hence the information relating to the Prepac® IS-6 device does not constitute a generic disclosure of VFFS devices employing impulse sealing means, or even provide a teaching that all VFFS machines will inevitably employ impulse sealing means.

4.2.2 The Appellant has submitted (section IV.b above) that the wording "such as" in the sentence at page 7, lines 32-34 of the application as originally filed reading:

"The pouches may be made using any liquid pouch-forming apparatus, including vertical form, fill and seal machines such as the Prepac® IS-6 or IS-7."

indicates that the named apparatus are only exemplary and that other suitable impulse sealed VFFS equipment may be employed.

In the Board's view however, the reference in this sentence to "any pouch forming apparatus" confirms the lack of restriction in respect of the type of pouch forming apparatus to be employed.

Further, at no point in this part of the application as originally filed is the sealing means disclosed, either at the generic level of the "any" apparatus, or at the more specific level of a particular class of apparatus, namely "vertical form, fill and seal apparatus".

It is further apparent to the Board that the wording "such as", employed in the cited passage of page 7 explicitly relates only to the clause "including vertical form, fill and seal apparatus", which clause does not contain - even by implication - any disclosure of the sealing method. Thus this statement provides only the information that machines operating on the vertical form, fill seal principle other than the specifically identified Prepac® IS-6 and IS-7 devices, may be employed, but does not provide any information about sealing means to be employed in the such "other" vertical form, fill and seal apparatus.

Accordingly, this part of the description of the application as filed does not provide a basis for a generic disclosure of impulse sealing with **any** (i.e. regardless of the manner in which the pouches are formed) type of pouch-forming apparatus, and also fails to provide a generic disclosure of pouch-forming apparatus of the class "vertical form, fill and seal" with impulse sealing means.

4.2.3 The discussion on page 8 from line 24, introducing the examples of the application in suit, relates to the production of pouches on a specific apparatus (Prepac® IS-6), under specific impulse sealing conditions (dimensions of jaws, operation parameters etc). This discussion is limited to the parameters discussed, and does not provide a basis for a generalised disclosure of impulse sealing independent of the specific parameters and apparatus.

The examples of the application as filed relate to said specific embodiment of impulse sealing, applied to

prepare pouches from specifically disclosed film compositions on a particular device, and hence also can provide no basis for a generic disclosure of the use of impulse sealing.

4.3 In the discussion of the prior art, the application as originally filed presents a discussion of a known film which is reported to yield pouches with defective seals resulting in "leakers" (i.e. pouches that leak due to pinholes at or close to the seal) (from page 2, line 34 to page 3, line 14). It is reported that these "leakers" occur despite optimisation of the operating conditions of the impulse sealer. Hence while this part of the description explicitly refers to an impulse sealer, this disclosure is restricted to a specific prior art film and does not refer to films in general. In the following passage (page 3, lines 15-21) an alternative film is reported, which, it is stated, yields pouches with improved "leaker" performance, and it is stated at page 3, line 22 that a further improvement has been made possible by using specific ethylene copolymers, which corresponds to the invention.

This part of the description fails to teach that impulse sealing is the only sealing method that would be contemplated in the context of pouch-forming on vertical form, fill and seal machines. Further, contrary to the submissions of the Appellant (see paragraphs IV.b and VII.a above) this passage does not define the technical problem with reference to, or against the background of, pouches prepared by a process inevitably employing impulse sealing. Rather, this part of the description teaches that pouches prepared from a known composition employing a known

sealing process failed to provide satisfactory results. The language employed in this part of the application as filed does not present either of the factors of influence (composition employed or sealing method adopted) as "invariable", or in any other way provides a clear teaching that, regardless of what other modifications may be contemplated, the sealing method should be retained unchanged. Nor is the discussion of the process aspect of the technical problem (from page 3, line 38 to page 4, line 14) related to the sealing method.

The fact that the route adopted by the Appellant to address the problem to be solved focussed on compositional rather than process aspects also cannot serve as a substitute or proxy for a generic disclosure of the use of impulse sealing in vertical form, fill and seal processes in the application as originally filed.

This discussion of prior art teachings is thus couched in the same general terms as that of the general introduction on page 1 and thus provides no basis for interpreting this disclosure as being restricted to a specific means for effecting the seal.

It is thus concluded that neither the description nor the claims of the application as originally filed provide a basis for a generic disclosure that, regardless of the method employed to make the pouches, the sealing (either exclusively the transverse seal, or, in the alternative any type of seal) be carried out by impulse sealing means, or that insofar as an apparatus of the vertical form, fill and seal type is

employed, it would inevitably and necessarily include such sealing means.

5. *Main request*

Claim 1 of the main request specifies that the steps of transversely heat sealing [in a process employing vertical form, fill and seal apparatus] are carried out by impulse sealing.

For the reasons explained above, the application as originally filed does not provide a generic disclosure of a process employing any (i.e. a generic) vertical form, fill and seal apparatus and in which the transverse sealing is accomplished by impulse sealing means.

Accordingly, claim 1 of the main request does not meet the requirements of Article 123(2) EPC.

6. *First auxiliary request*

The definition in the first auxiliary request of the sealing means is identical to that of the main request. Accordingly, for the same reasons as given in respect of the main request, it is concluded that claim 1 of the first auxiliary request fails to meet the requirements of Article 123(2) EPC.

7. *Second auxiliary request*

Claim 1 of the second auxiliary request specifies that the vertical form, fill and seal apparatus includes impulse sealing means, and that the steps of

transversely heat sealing are accomplished by impulse sealing.

As explained above, the application as originally filed fails to provide a generic disclosure of a vertical form, fill and seal apparatus including impulse sealing means, or a generic disclosure of a process employing such a technique wherein the steps of transversely heat sealing are accomplished by impulse sealing.

Accordingly, claim 1 of the second auxiliary request does not meet the requirements of Article 123(2) EPC.

8. *Third auxiliary request*

Claim 1 of the third auxiliary request requires that the vertical form, fill and seal apparatus includes impulse sealing means to seal the pouch.

Analogously to the reasons given in respect of the main and 1st and 2nd auxiliary requests, the application as originally filed does not disclose in generic terms such an apparatus equipped with the said sealing means.

Accordingly, claim 1 of the third auxiliary request does not meet the requirements of Article 123(2) EPC.

9. In the light of the conclusions reached in paragraphs 5-8 above, it is apparent that claim 1 of none of the requests (main or 1st to 3rd auxiliary requests) meets the requirements of Article 123(2) EPC.

Since the consequence of this conclusion is that the patent cannot be maintained, it is not necessary to consider the other objections under Articles 123(2) and (3) EPC raised by the Respondents (Opponents) (cf Sections IV(c)-(e) and VI(b) above).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

E. Görgmaier C. Idez