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Datasheet for the decision of 9 January 2014

Case Number: T 1217/11 - 3.3.09

Application Number: 07010352.8

Publication Number: 1862518

IPC: C09J7/02, G09F3/10

Language of the proceedings: EN

Title of invention:
Use of plastic film adhesive bands

Patent Proprietor:
Irplast S.p.A.

Opponent:
P.E. Labellers S.p.A.

Headword:

Relevant legal provisions:
EPC Art. 83, 123(2), 123(3), 54(2), 56

Keyword:
Sufficiency of disclosure - (yes)
Amendments - added subject-matter (no) - broadening of claim (no)
Novelty - (yes)
Inventive step - after amendment

Decisions cited:

Catchword:

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Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1217/11 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 9 January 2014

Appellant: (Patent Proprietor)	Irplast S.p.A. Strada Provinciale Val d'Elsa Zona Industriale Terrafino 50053 Empoli (FI) (IT)
Representative:	Sama, Daniele Sama Patents, Via G.B. Morgagni, 2 20129 Milano (IT)
Respondent: (Opponent)	P.E. Labellers S.p.A. Viale Europa 25 46047 Porto Mantovano (MN) (IT)
Representative:	Modiano, Micaela Nadia Modiano & Partners (IT) Via Meravigli, 16 20123 Milano (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 7 April 2011 revoking European patent No. 1862518 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman: W. Sieber
Members: W. Ehrenreich
K. Garnett

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 1 862 518 in respect of European patent application No. 07 010 352.8, filed on 24 May 2007 in the name of Irplast S.p.A., was announced on 29 April 2009 in Bulletin 2009/18.

II. The patent was granted with 16 claims, claim 1 reading as follows:

"1. Use for "roll-feed" labelling processes of plastic film adhesive bands of bioriented heat-shrinkable polypropylene polymers, with application of pressure-sensitive adhesive according to transversal sections with respect to the unwinding direction of the roll or the longitudinal direction of the tape, or according to definite areas, to label containers or various types of articles on high speed manufacturing lines, higher than 6,000 packages/hour, combined with scraps lower than 2%."

Claims 2 to 16 were dependent claims.

III. Opposition against the patent was filed by P.E. Labellers S.p.A. on 28 January 2010. The opposition was based on the grounds that the subject-matter of the patent lacked both novelty and an inventive step (Article 100(a) EPC) and that the invention was insufficiently disclosed (Article 100(b) EPC).

The opponent *inter alia* relied on the following documents:

E1 EP-A 0 928 273;
E2 EP-A 1 074 593;

E8 US-A 5 292 561.

IV. During the written procedure before the opposition division the proprietor filed sets of claims for auxiliary requests 1 to 5 and a declaration by Mr. Giacomo Soluri. The declaration relates to experiments A to D carried out under the supervision of Mr. Soluri. Experiments A and C represent comparative experiments relating to a reworking of example 1A of E2 (experiment A) and the use of the film "Label-Lyte^{TM} 38LL247" in the roll-feed labelling process of the invention (experiment C). Experiments B and D represent the invention.

V. In the oral proceedings before the opposition divison held on 1 March 2011 the proprietor withdrew auxiliary requests 1 to 4 and auxiliary request 5 became auxiliary request 1. New sets of claims for auxiliary requests 2 to 4 were filed. Furthermore, the proprietor presented the document:

E14 Product data sheet, pages 1,2, for "Label-Lyte^{TM} 38LL247 Oriented Polypropylene Film" from Exxon Mobil Chemical, Ides Prospector.

The opponent filed the document:

E13 Product data sheet, pages 1,2, for "Label-Lyte^{TM} 38LL247 Oriented Polypropylene Film" from Exxon Mobil, retrieved from internet: http:// www.oppfilms.com.

VI. By its decision orally announced on 1 March 2011 and issued in writing on 7 April 2011 the opposition division revoked the patent. In the opposition division's view:

- the invention claimed in claim 1 of the main request (claims as granted) was insufficiently disclosed, contrary to Article 83 EPC;
- the amendments in claim 1 of auxiliary request 1 did not meet the requirements of Article 84 EPC or Rule 80 EPC;
- the subject-matter of claim 1 of auxiliary request 2 was not inventive, in particular with regard to E2 taken as the closest prior art.

Auxiliary requests 3 and 4 were not admitted into the proceedings.

VII. On 27 May 2011 the proprietor (hereinafter: the appellant) filed a notice of appeal against the decision of the opposition division and paid the prescribed fee on the same day. The grounds of appeal were received on 3 August 2011. The appellant requested maintenance of the patent as granted (main request), alternatively maintenance of the patent on the basis of the claims according to auxiliary request 2, filed in the oral proceedings before the opposition division. Further documents were presented with the grounds of appeal, *inter alia:*

E17 Technical brochure of the BOPP film "Label-Lyte™ LL247"

VIII. In its letter dated 20 December 2011, the opponent (hereinafter: the respondent) raised objections under Articles 83, 54 and 56 EPC against the subject-matter according to the main request, and under Articles 83, 56 and 123(2)/(3) EPC against the subject-matter according to auxiliary request 2. A copy of the document:

E18 Technical data sheet of the film "Label-Lyte ROSO 40LR210

was enclosed.

IX. Oral proceedings were arranged to take place on 9 January 2014. On 22 November 2013 the board issued a communication and expressed its preliminary view on essential points of the case, as follows:

a) Concerning sufficiency of disclosure the board raised the questions whether the failure of experiment C in the appellant's declaration dated 28 December 2010, and the lack of a definition in the patent specification for the film thickness and for the term "scraps"; were matters of insufficiency.

b) Concerning the respondent's objection under Article 123(2)/(3) EPC with regard to the amendments in claim 1 of auxiliary request 2, the board expressed some doubt whether the omission of the temperature range of 60°C to 200°C for the determination of the heat shrink in MD by the test OPMA TC 4 infringed Article 123(2) EPC.

c) Concerning novelty, the board expressed its view that the respondent's novelty objection *vis à vis* E1 was only raised versus the subject-matter of the claims as granted and raised the question whether the feature "bi-oriented polypropylene film" in example 4 of E1 characterised the film as heat-shrinkable.

d) Concerning the assessment of inventive step, document E2 was considered to represent the closest prior art.

X. With its letter dated 3 January 2014 the appellant filed a retyped version of the claims of auxiliary request 2.

XI. By telefax dated 8 January 2014 the respondent informed the board that it would not be attending the oral proceedings scheduled for 9 January 2014.

XII. During the oral proceedings, which was attended solely by the appellant, the objections under Articles 83, 123(2), 54 and 56 EPC were discussed. In the course of this discussion the appellant withdrew its main request and filed, as its sole request, an amended set of claims 1 to 11 which was mainly based on former auxiliary request 2. An adapted description was also filed. Claim 1 of this request reads as follows:

"1. Use for "roll-feed" labelling processes of plastic film adhesive bands of bioriented heat-shrinkable polypropylene polymers, with application of pressure-sensitive adhesive according to transversal sections with respect to the unwinding direction of the roll or the longitudinal direction of the tape, or according to definite areas, to label containers or various types of articles on high speed manufacturing lines, higher than 6,000 packages/hour, combined with scraps lower than 2%,
wherein the propylene polymers are homopolymers and/or copolymers of the propylene with ethylene and/or linear or branched α-olefins, having a number of carbon atoms between 4 and 10,
the use comprising the following steps;

1) unwinding of the printed plastic film roll spread with pressure-sensitive adhesive according to transversal sections with respect to the tape direction, or at definite sectors;
2) tape cutting to obtain the label;
3) label application on the container;
4) label heat-shrink by passing the labelled article in a heat-shrink oven at temperatures between 60°C and 200°C;

wherein in order to unwind the roll and apply the label, the moving parts of the used equipment that are in contact with the "pressure-sensitive" adhesive have an antiadhesive surface,
wherein the plastic films show uniaxial heat-shrinkage in MD, wherein the heat shrink values in MD, determined by the OPMA TC 4 (Oriented Polypropylene Manufacturer's Association) heat-shrink-test (130°C - 5 minutes in air), are comprised between 5% and 70%,
wherein the label heat shrinks after its application, while the labelled package passes in the heat-shrink tunnel to obtain an adherent labelling conforming to concave, convex or irregular surfaces."

Claims 2 to 11 are dependent claims.

XIII. In the following, the arguments of the parties, as far as they are relevant for the appellant's sole request submitted in the oral proceedings, are summarized.

XIV. Arguments of the respondent/opponent

a) Sufficiency of disclosure

The failure of experiment C reported in the appellant's declaration dated 28 December 2010

shows that the claims embrace non-working examples because the BOPP film Label-Lyte™ 38LL247 used in this experiment is heat-shrinkable. This is evident from the product sheet E13 setting out negative values for its dimensional stability of -6.0% in both MD and TD. Negative values for the dimensional stability of -19% in MD and -2% in TD are also given for the film "Label-Lyte™ ROSO 40LR201" designated as "machine direction shrinkable" in the section "Product Description" of the product sheet E18.

The film thickness is not defined in the description of the patent specification nor in claim 1. Therefore, claim 1 relates to the use of a film of any thickness for the roll-feed labelling process at any speed higher than 6,000 packages/h. This is, however, unrealistic in view of the disclosure in column 1, lines 43 to 51, of E8 that a BOPP film which does not have the right thickness cannot be used on fast running machines.

The term "scraps" is a subjective term because no standard definition exists for this term. The skilled person is thus not able to evaluate the labels on an objective basis.

b) Amendments - Article 123(2)/(3) EPC

Claim 15 as granted refers back to "claims 1-14". This has to be interpreted as a use according to all previous claims. Combination of claim 15 only with claim 1 as granted thus extends the scope of the patent, contrary to Article 123(3) EPC.

The feature that the heat shrink values in MD are measured "at temperatures in the range 60-200°C" has been removed from granted claim 14, contrary to the provisions of Article 123(2) EPC. This deletion also broadens the scope of granted claim 14 itself, and thus also the scope of the combined granted claims 1, 2, 13, 14 and 15, forming the basis of the new amended claim 1, contrary to Article 123(3) EPC.

c) Inventive step

E2 is the closest prior art. The claimed use differs therefrom only by a higher labelling speed of > 6000 packages/h. In paragraph [0015] of E2 there is, however, a pointer which would induce a skilled person to explore labelling speeds higher than those expressly mentioned in E2.

XV. Arguments of the appellant

a) Sufficiency of disclosure

Experiment C reported in the declaration dated 28 December 2010 failed because the film Label-Lyte™ 38LL247 used in this experiment has an equal shrink in both the MD and TD, which causes damages of the label. Claim 1, however, requires an uniaxial shrink only in MD. Experiment C therefore does not represent the invention. In contrast thereto, experiment B demonstrates the success of the invention and corresponds to claim 1.

b) Inventive step

It is an essential element of the claimed invention that the polypropylene film to be used for the roll-feed labelling process has a pressure sensitive adhesive in a certain pattern on its surface transversal to its unwinding direction, is uniaxially heat-shrinkable only in MD and is indeed heat shrunk by passing the labelled package through a heat-shrink tunnel.

Also, the feature of claim 1 that the moving parts of the labelling device that are in contact with the pressure sensitive adhesive are equipped with an anti-adhesive surface, contributes to the acceleration of the labelling process.

Although E2 discloses a labelling process and discloses the use of polypropylene films which are preferably heat shrinkable in MD there is no indication that the labelling speed can be increased from 5,100 packages/h according to example 1A to more than 6,000 packages/h without the formation of scraps when the film is heat shrunk by passing the package through a heat-shrink tunnel.

XVI. The appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of its sole request as filed during the oral proceedings.

XVII. The respondent, in its letter dated 20 December 2011, requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. Amendments - Article 123(2)/(3) EPC

2.1 Claim 1 of the appellant's sole request is a combination of claims 1, 2, 12 to 14 as filed and the passage on page 9, lines 4 to 7 of the application as filed, and includes the further modification that the feature in claim 13 relating to the shrink temperature in the range 60°C - 200°C has been deleted. However, this temperature range is already a feature of step (4) of original claim 14 referring back to claim 13 and is now a feature of the amended claim 1. Thus, omission of this feature from claim 13 relating to the OPMA TC 4 heat-shrink test does not violate Article 123(2) EPC.

2.2 The respondent also raised an objection under Article 123(3) EPC that claim 1 of the appellant's auxiliary request (now the appellant's sole request) broadened the scope of the patent. It was argued that claim 1 includes a combination of granted claim 1 with granted claim 15, the latter referring back to granted claims 1 to 14. This back-reference had to be interpreted as a use according to claim 15 including all features of claims 1 to 14. Because, however, the combination of granted claims 1 and 15 as a basis for a new claim 1 no longer incorporates the content of claims 1 and 14, a broadening of the scope occurred.

The board does not share this view. It is common practice for the formulation of a claim set including claims dependent on an independent claim to refer a particular dependent claim back to all "previous claims". This kind of back-reference is not to be interpreted in its narrowest aspect in that the respective dependent claim necessarily has to include the features of all previous claims, but is also seen

in its broader sense as a combination of its specific features with those of the corresponding independent claim. Thus, a combination of claim 15 with claim 1 is not a broadening of the scope of the patent. Therefore, no violation of Article 123(3) EPC occurs.

3. Sufficiency of disclosure

3.1 Claim 1 of the appellant's request now requires that the BOPP film is uniaxially shrinkable in MD. Experiment C in the appellant's declaration, showing that the label is badly (? damage cannot be "complete") damaged, is not an experiment which falls under the scope of claim 1 because the film Label-Lyte^{TM} 38LL247 used in that experiment equally shrinks in both MD and TD as set out in the product sheet E13 and as explained by the appellant in the oral proceedings. Experiment C is thus not evidence that the claimed invention embraces non-working embodiments. Thus the objection of lack of sufficiency based on experiment C must fail.

3.2 The respondent raised a further objection of insufficiency of disclosure because the patent failed to define the thickness of the film. This objection was based on the disclosure in E8.

It emerges from E8 that purely longitudinally stretched PP-films have the disadvantage of poor mechanical properties and that therefore a high film thickness is necessary for processing such films on fast-running labelling machines (column 1, lines 41 to 51). Consequently, the teaching is derivable from E8 that, to avoid a high film thickness and to ensure good film processability on fast-running labelling machines, bioriented films which are preferably uniaxially heat-shrinkable in MD should be used (column 1, lines 51 to

56; column 1, lines 17 to 21 in conjunction with column 1, line 64 to column 2, line 31). The disclosure in E8 cannot therefore support the respondent's further objection of insufficiency of disclosure.

3.3 As regards the objection of lack of sufficiency with respect to the lack of a definition of the term "scraps" the board takes the position that the skilled person, on the basis of his expertise in processing films on labelling machines, is able to evaluate the quality of the label on a package and therefore to reliably determine the scrap rate.

3.4 The invention is therefore sufficiently disclosed.

4. Novelty

In its written submissions, novelty of the subject-matter according to the appellant's previous auxiliary request 2 was not objected to by the respondent. As mentioned above, the appellant's sole request is based on previous auxiliary request 2. The board notes that none of the cited documents expressly and unambiguously discloses in combination all features of claim 1 of this request. The claimed subject-matter is therefore novel.

5. Inventive step

5.1 The invention concerns the use of plastic film adhesive bands in roll-feed labelling processes in order to label containers at a high speed with a low scrap rate. The speed exceeds 6,000 packages/h and the scrap rate at this speed is lower than 2% (patent specification, paragraphs [0001] and [0008]).

5.2 The closest prior art is represented by E2. This document is concerned with a process for producing adhesive bands based on plastic films, preferably bioriented PP films, with one surface partially coated with an adhesive applied in specific transversal areas of said surface, the bands being suitable for collating or wrap-around labelling containers, bottles etc., without any drawbacks (e.g. scraps), such a process allowing a high labelling speed (column 2, paragraph [0015] in combination with paragraphs [0007] and [0022]). Preferably, the plastic films have an uniaxial shrink in the longitudinal direction (MD). From figures 1 and 2, explained in paragraphs [0034/35] of E2, it can be derived that the process is carried out as a roll-feed labelling process.

In Example 1A of E2 a labelling process is described which has been carried out on a Twin Pack® labelling machine. The printed film is an OPP (Oriented PolyPropylene) film coated on transversal patterned areas with an adhesive acrylic emulsion. Its mechanical properties are not further defined. The labels show a good conformance to the shape of the container. The labelling speed reached 85 labels/min., which corresponds to 5,100 labels/h, without jamming of the labelling machine or formation of scraps.

5.2.1 In its declaration dated 28 December 2010 the appellant stated that the scrap rate increased to 99.9% when the labelling speed of the process according to Example 1A of E2 was raised to 95 labels/min (corresponding to 5,700 labels/h).

5.2.2 In the oral proceedings the appellant explained that reworking of the process according to example 1A of E2 was carried out without passing the labelled container

through a heat-shrink tunnel. Therefore, the labelling speed could not be raised to above 6,000 labels/hour without causing a high scrap rate. Moreover, the absence of an anti-adhesive surface on the moving parts of the labelling machine was responsible for a lower productivity because the labelling machine had to be stopped every 2 hours in order to avoid jamming and scraps.

5.3 In the light of the above, the problem to be solved is seen in the use of a BOPP film in a roll-feed labelling process which is carried out on a high-speed manufacturing line with a speed higher than 6,000 packages/hour combined with a low scrap rate of less than 2%.

5.4 As a solution to this problem claim 1 of the appellant's sole request requires:

- that the BOPP-film is uniaxially shrinkable in machine direction;
- that the labelled container passes a heat-shrink tunnel in order to heat shrink the label after its application onto the container;
- that the moving parts of the equipment that are in contact with the adhesive onto the film surface have an anti-adhesive surface.

5.5 Examples 1 and 2 of the patent and experiments B and D according to the appellant's declaration dated 28 December 2010, which all represent the claimed invention, show that a labelling speed considerably above 6,000 packages/h can be reached for containers having various shapes, without jamming of the labelling machine and without scraps. In this context the appellant confirmed in the oral proceedings that the

BOPP film is heat shrunk in MD by passing the labelled container through a heat-shrink tunnel.

Thus, the problem posed has credibly been solved.

5.6 There is no disclosure in the cited prior art documents which would induce the skilled person to pass a container labelled with an uniaxially heat-shrinkable BOPP film through a heat-shrink tunnel in order to shrink the label uniaxially in MD, thereby increasing the labelling speed to > 6,000 packages/h without having a high scrap rate.

Although E2 points in paragraph [0028] to the possibility of using preferably films with uniaxial heat shrink properties in the longitudinal direction, there is no pointer that these shrink properties in only one direction are specifically important for a further increase of the labelling speed, i.e. above the speed exemplified in the examples of E2. A skilled person intending to increase the labelling speed of 5.100 packs/h reached in example 1A of E2 to over 6,000 packs/h while retaining a low scrap rate would therefore have no incentive to select an OPP film which is uniaxially shrinkable in longitudinal direction, and to pass the labelled container through a shrink tunnel in order to initiate shrink of the film.

There is also no indication in the prior art towards providing an anti-adhesive surface onto those moving parts of the labelling equipment that are in contact with the adhesive of the BOPP film in order to avoid jamming of the labelling machine, such jamming being responsible for a low speed and a high scrap rate.

5.7 The solution to the problem posed is therefore not obvious.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of:

(a) Claims 1 to 11 according to the sole request as filed during the oral proceedings of 9 January 2014; and
(b) The amended description, pages numbered 2 to 5, as filed during the oral proceedings of 9 January 2014.

The Registrar: The Chairman:

R. Schumacher W. Sieber

Decision electronically authenticated