

Decision of Technical Board of Appeal 3.3.3 dated 20 November 1996

T 472/92 - 3.3.3*

(Language of the proceedings)

Composition of the board:

Chairman: C. Gérardin

Members: P. Kitzmantel

J. A. Stephens-Ofner

**Patent proprietor/Respondent: SEKISUI KASEIHIN KOGYO KABUSHIKI
KAISHA**

Opponent/Appellant: Owens-Illinois, Inc.

Headword: Joint Venture/SEKISUI

Article: 54, 56, 117, 125 EPC

Rule: 72 EPC

**Keyword: "Novelty (yes) - prior public use not proved up to the
hilt - assumption of confidentiality on the basis of a Joint Venture Agreement"
- "Inventive step (yes) - no incentive - extrinsic properties of a material of prior
public use not made available to the public by the mere delivery to the
recipient company (see G 1/92)"**

Headnote

I. Although the standard of proof is the same for all objections covered by Article 100 EPC (cf. T 270/90, OJ EPO 93, 725), in those prior public use cases, where practically all the evidence in support of an alleged prior public use lies within the power and knowledge of the Opponent, the latter has to prove his case up to the hilt (Reasons 3.1).

II. The printability of a material, as well as its surface characteristics after exposure to thermal shrinkage conditions, are not "intrinsic" properties which according to G 1/92, should be considered to have been made available to the public by the mere delivery of said material to a customer (Reasons 7.3.4 to 7.3.7).

Summary of facts and submissions

I. European patent application No. 83 100 303.3 in the name of Sekisui Kaseihin Kogyo Kabushiki Kaisha, which had been filed on 14 January 1983, claiming priority from six JP applications, the earliest one filed on 14 January 1982, resulted in the grant of European patent No. 84 360 on 20 May 1987 on the basis of 13 claims.

The independent Claims 1, 10 and 11 read as follows:

"1. A sleeve comprising a laminated sheet (S) having two films, said laminated sheet having a different shrinkage rate in different directions, characterized in that said films comprise polystyrene, one of the said films (1) being a more highly shrinkable foamed film, and one of said films being a lesser shrinkable non-foamed film (2), said foamed film having a surface skin (11) thicker on its side opposite to that laminated to said non-foamed film;

flow-direction ends of said laminated sheet (S) being bonded together so that the thicker surface skin of said foamed film (1) faces the interior of said sleeve; and

said laminated sheet (S) having a flow-direction shrinkage rate of 60% or less and a widthwise shrinkage rate of 10% or less, said flow-direction shrinkage rate being greater than said widthwise shrinkage rate, the said shrinkage rates being obtainable by heating at 130°C for twelve seconds in an oven."

"10. A process for producing a sheet (S) for forming a sleeve in which a foamed film (1) and a non-foamed film (2) are concurrently extruded characterized by said foamed film and said non-foamed film being polystyrene films; cooling said foamed film (1) more quickly than said non-foamed film (2), so that said foamed film (1) has a higher shrinkage rate than said non-foamed film (2), and said foamed film (1) has a surface skin layer (11) thicker on its side opposite that laminated to said non-foamed film (2); and

stretching the laminated sheet (S) at different rates relative to the flow and widthwise directions of said laminated sheet, so that the resulting flow-direction shrinking rate is greater than the widthwise shrinking rate and is 60% or less and said widthwise shrinking rate is 10% or less, the said shrinkage rates being obtainable by heating at 130°C for twelve seconds in an oven."

"11. A laminate comprising a sheet (S) having a foamed film (1) and a non-foamed film (2) characterized by said films comprising polystyrene, said foamed film being more highly shrinkable and said non-foamed film being less shrinkable, by said foamed film having a surface skin (11) thicker on its side opposite that laminated to said non-foamed film; and

said laminated sheet (S) having a flow-direction shrinkage rate of 60% or less and a widthwise shrinkage rate of 10% or less, said flow-direction shrinkage rate being greater than said widthwise shrinkage rate, the said shrinkage rates being obtainable by heating at 130°C for twelve seconds in an oven."

Dependent Claims 2 to 9 relate to preferred embodiments of the subject-matter of Claim 1; dependent Claims 12 and 13 relate to preferred embodiments of the subject-matter of Claim 11.

II. Notice of Opposition was filed by Owens-Illinois Inc. on 19 February 1988 requesting revocation of the patent in its entirety, on the ground that the claimed subject-matter lacked novelty and/or inventive step.

The opposition was essentially based

(i) on an alleged prior public use of the subject-matter of Claim 11 of the patent in suit caused by the delivery of Opponent's "General Purpose Plastishield" material to Sun-Lily Company, Japan (hereinafter "Sun-Lily"), and to Gerresheimer Glas AG, Germany (hereinafter "Gerresheimer"), as evidenced by

- a first Affidavit of Mr J. A. Karabedian, dated 8 February 1988, comprising Exhibits A and B (hereinafter "Kara-1"), containing evidence for the delivery to

- Sun-Lily of 40 rolls of "General Purpose Plastishield" material, Order No. 69-8452 (hereinafter "consignment S3"; see Exhibit A of Kara-1),

and to

- Gerresheimer of 40 rolls of "General Purpose Plastishield" material , Order No. 69-8515 (hereinafter "consignment G3"; see Exhibit B of Kara-1),

supplemented in a later stage of the first instance opposition proceedings by

- a second Affidavit of Mr J. A. Karabedian, dated 13 December 1989, comprising Exhibits C to Q (hereinafter "Kara-2"), containing additional evidence for consignments S3 and G3 and new evidence for the delivery to Sun-Lily

- of 6 rolls of "General Purpose Plastishield" material, Order No. 69-8464 (hereinafter "consignment S1" see Exhibits N, O, P of Kara-2),

and

- of 40 rolls of "General Purpose Plastishield" material , Order No. 69-8427 (hereinafter "consignment S2"; see Exhibit Q of Kara-2),

- a Declaration by Mr J. A. Karabedian, dated 27 January 1992,

- a first Affidavit of Mr M. Yoshida, dated 1 November 1989, comprising Exhibits SL-1 to SL-5 (hereinafter "Yoshida-1"),

- a second Affidavit of Mr M. Yoshida, dated 22 January 1992 (hereinafter "Yoshida-2"),

- a first Affidavit of Mr H. Takahashi, dated 8 December 1989, comprising Exhibits NKG1 and NKG2 (hereinafter "Taka-1"),

- a second Affidavit of Mr H. Takahashi, dated 21 February 1991, comprising Exhibits NKG3 to NKG7 (hereinafter "Taka-2"),

- a third Affidavit of Mr H. Takahashi, dated 22 January 1992 (hereinafter "Taka-3"),

and

- a Declaration ("Eidesstattliche Erklärung") of Mr K. Kricheldorf, dated 23 January 1992, with Annexes ("Anlagen") 1 to 3, comprising evidence for consignment G3 referred to in Kara-1, as well as new evidence relating to the delivery to Gerresheimer of

- 3 rolls "General Purpose Plastishield", Order No. 69-8393 (hereinafter "consignment G1"), and

- 40 rolls "General Purpose Plastishield", Order No. 69-8414 (hereinafter "consignment G2"),

and

(ii) on the disclosure, inter alia, in documents

(1) US-A-3 979 000 and

(4) GB-A-1 383 622.

III. By its decision announced orally on 28 January 1992 and issued in writing on 29 April 1992 the Opposition Division rejected the opposition, holding as follows:

...

IV. Notice of Appeal against the above decision was filed by the Opponent (Appellant) on 20 May 1992. ...

V. ...

VI. In his written submissions as well as during the oral proceedings the Appellant presented the following main arguments:

...

VII. In his written submissions as well as during the oral proceedings the Respondent (Patentee) presented the following main arguments:

...

VIII. The Appellant requested that the decision under appeal be set aside and the European patent No. 84 360 be revoked.

The Respondent requested that the appeal be dismissed.

Reasons for the decision

1. The appeal is admissible.

2. Evidence submitted at the appeal stage

...

3. Prior public use

3.1 Concerning the standard of proof that needs to be applied, the established legal practice of the Boards is to use the self-same standard of proof in prior public use objections as it does in others covered by Article 100 EPC: the balance of probability (see, e.g. T 270/90 (OJ EPO 1993, 725)). In that case, the Board expressly refused to accept a submission that the much more rigorous standard of "beyond all reasonable doubt" should apply, even if, as was the case there, **both** parties were able to access and to adduce evidence relating to the decisive issue of confidentiality of the transactions alleged to constitute prior public use.

The Board reaffirms this approach, subject to the following caveat. Deciding any fact at issue by applying the above standard requires making a choice as to which one of the two contradictory propositions espoused by the parties is more likely to be true, since two contradictory propositions cannot, in logic and therefore in law, be either true or false. In judging the truth or falsity of either, regard must be had to the nature, content and likely source of the evidence that is available and can be adduced by the parties.

Generally speaking, in cases not involving the issue of prior public use, both parties are able to obtain and to adduce the evidence upon which their respective case rests. By contrast, in the majority of prior public use cases practically all the evidence in support of an alleged prior public use lies within the power and knowledge of the opponent, so the patentee seldom has any ready, or indeed any access to it at all. All he can, in practice, do is to challenge that evidence by pointing out any inconsistencies contained in it or to draw attention to any gaps in the chain of

commercial transactions that needs to be established by the opponent in order to succeed on this ground.

In consequence, an opponent must prove his case **up to the hilt** , for little if any evidence will be available to the patentee to establish the contradictory proposition that **no** prior public use had taken place.

3.2 Concerning the issue whether an invention has been made available to the public by prior use, the following facts must be established to the above standard:

(a) the date on which the prior use occurred ("when" issue),

(b) exactly what was in prior use ("what" issue), and

(c) the circumstances surrounding the prior use (issue of confidentiality).

Deliveries to Sun-Lily; Claim 11 of patent in suit

3.3 ...

The first issue that falls to be decided is the alleged confidentiality of the delivery of the materials of consignments S1, S2 and S3, according to the Appellant sufficient for more than 10 million labels, by Owens-Illinois to Sun-Lily; these materials, **per se** , were being relied upon by the Appellant as constituting prior public use. The written evidence is as complex and compendious as it is lengthy in relation to **what** was delivered and **when** . By contrast, it is somewhat brief upon the preliminary, but decisive question whether these deliveries were the outcome of a commercial, i.e.

arms-length transaction of sale between Owens-Illinois and Sun-Lily or were the result of a transaction made under the aegis of some collaborative (albeit commercial) venture which imparted or expressly imposed an obligation of confidentiality upon Sun-Lily. If so, clearly, the "what" and "when" issues need not be decided at all with respect to these deliveries.

3.4 According to the uncontested evidence of Mr Yoshida (Yoshida-2) Sun-Lily **was** a business corporation set up as a joint venture between Owens-Illinois and Mitsui Toatsu, another Japanese company. In seeking to rebut the Respondent's submission that the deliveries to Sun-Lily were, expressly or by operation of law, made under confidentiality obligations directly or indirectly arising from Sun-Lily's "parentage", namely the Joint Venture between the Appellant Owens-Illinois and the Japanese company, Mr Yoshida merely asserted that in respect of its business activities Sun-Lily was "independent" of Owens-Illinois.

During the oral proceedings the Appellant was invited by the Board to shed some light upon the contents of the Joint Venture Agreement. Its earlier production in the proceedings could have resolved the key issue of the existence of an **express** confidentiality obligation between Sun-Lily and one of its "parents" or, at least, have enabled some conclusion to be drawn from the Agreement as a whole, including the usual Preamble setting out the purposes of the Joint Venture, as to the likely subsistence of implicit obligations of confidentiality. Unfortunately, such help was not forthcoming, indeed the Appellant's representative admitted that he had never seen the Joint Venture Agreement, although he then went on to assert that the deliveries in question had been made outside the scope of any confidentiality obligation possibly contained in it.

In the light of the absence of any evidence relating to the nature and content of the Agreement that set up Sun-Lily, and bearing in mind that Mr Yoshida appears, from the content of his evidence as a whole, to have been employed on the technical side of Sun-Lily, his knowledge of the nature and content of the Agreement and of its legal implications has to be treated as unsafe. It follows that the evidence as a whole is insufficiently weighty to meet the high **practical** standard of proof earlier referred to (point 3.1 above). This evidence therefore cannot, in itself, displace the presumption that the founding Joint Venture Agreement did, as is normally the case in order to protect the fruits of each partner's Research & Development, contain confidentiality conditions or warranties binding upon Sun-Lily in respect of its relevant business activities which the Board, again in the absence of sufficiently convincing evidence to the contrary, accepts to have covered the deliveries here at issue.

3.5 The Appellant additionally relied on two sets of commercial facts from which the arms-length nature of the deliveries could be convincingly inferred.

3.5.1 Firstly, the large quantity of material delivered, sufficient for more than 10 million labels, indicated a normal buyer-seller relationship. The Respondent countered by pointing to the continuing series of tests initially conducted by Sun-Lily and subsequently by NKG upon the material delivered, the latter company under an express contractual obligation of confidentiality covering "the use of the machine" they employed. Thus, he argued, the materials delivered to Sun-Lily had not left the development stage, and the large number of labels was as consistent with a macro-scale testing programme as with an outright sale, so that the Appellant's case failed to meet the standard of proof required in prior public use cases and outlined previously in paragraph 3.1 *ibid*.

The Board accepts the Respondent's argument under this heading on the basis that there remains a sufficient and reasonable degree of doubt as to precisely what legal conditions can be inferred from the large number of labels - if indeed 10 million was large having regard to the size of the potential/actual market for bottles.

Clearly, and in support of such doubt, the obligation of confidentiality fettering NKG's use of their machinery must have covered the very nature of what that machinery was being used to do, since such use would not have been possible without detailed knowledge of the properties of the material itself.

3.5.2 Secondly, much reliance was placed by the Appellant upon the fact that at the relevant time Sun-Lily were also evaluating materials submitted to them for testing, in the hope of subsequent orders, by other suppliers, undoubtedly competitors to Owens-Illinois.

Such a state of affairs is entirely normal. Material suppliers routinely submit samples of their wares to potential users, hoping for orders, and, conversely, users are interested to investigate samples of competitive products.

Routinely, too, material suppliers safeguard the fruits of their own Research & Development from the effects of the "springboard doctrine" common in Anglo-Saxon jurisdictions, here the USA where the Appellant is headquartered and based, by secrecy agreements. It follows that "independent" evaluation by Sun-Lily of labels made by the Appellant's competitors under such routine conditions, the existence of which the Appellant did not challenge during the entire opposition and appeal proceedings, argues **for** rather than against the subsistence of like conditions, i.e. conditions of confidentiality, between Owens-Illinois and Sun-Lily. It certainly cannot credibly be prayed in aid of a completely laissez-faire or arms-length relationship

between these two companies, which were bound by the provisions of a Joint Venture Agreement. Thus Sun-Lily, whilst free to compare various labels, was not free to divulge their make-up to anyone.

On this footing, too, the Appellant's case must therefore fail.

3.6 Accordingly the Board finds that the Appellant has not established to the required standard of proof that deliveries S1, S2 and S3, or either of them, were made as a result of a normal commercial arms-length sale by the Appellant to Sun-Lily. Therefore, this part of the prior public use attack fails.

Deliveries to Gerresheimer; Claim 11 of the patent in suit

3.7 In contrast to the special relationship between Owens-Illinois and Sun-Lily as established by the Joint Venture Agreement, the evidence adduced with respect to the deliveries from Owens-Illinois to Gerresheimer (consignments G1, G2 and G3) clearly established that these were made under the normal conditions of an arms-length sale, in which, on receipt of the goods, the buyer acquires full beneficial ownership of those delivered goods without any prior accrued legal rights, including those of confidentiality. This also has the effect of establishing state of the art that had been available to the public within the meaning of Article 54(2) EPC.

3.8 As to the **dates** on which the materials of consignments G1, G2 and G3 were received by Gerresheimer, no documents were produced indicating any particular date. The documents submitted with the Declaration of Mr Kricheldorf (Annexes 1 to 3) do, however, lead to the conclusion with an extremely high degree of certainty that all these materials were in the possession of Gerresheimer before 14 January 1982:

In particular:

...

Taking this evidence as a whole, the Board concludes that Gerresheimer did receive the relevant materials before 14 January 1982.

3.9 The last issue to be decided with respect to the alleged prior public use of the material of consignments G1, G2 and G3 is **what** the delivered materials actually were.

The Appellant admitted in the oral proceedings that no test reports had been submitted which referred directly and individually to the materials of these consignments; instead he relied upon the bare assertion in Section 2 of Kara-3 that all materials of these consignments had been made on the same machine in Toledo, Ohio, and had been manufactured in accordance with the "Manual".

For the following reasons, the documentary evidence submitted by the Appellant is insufficiently cogent and convincing to support his allegation that the delivered materials complied with all the requirements of Claim 11 of the patent in suit.

3.9.1 Relative shrinkability of the foamed film and the non-foamed film

...

3.9.2 Shrinkability in flow (= machine) direction

...

3.9.3 Shrinkability in widthwise (cross) direction

...

3.9.4 Thus, the Appellant has failed to establish to the standard required (see point 3.1 super ibid.) that the materials tested by Owens-Illinois on 9 September 1981 met the shrinkage requirements according to Claim 11.

3.10 In consequence, the attack on the novelty of the subject-matter of Claim 11 based on the alleged prior public use by the delivery of the materials of consignments G1, G2 and G3 also fails.

Deliveries to the Laboratory of Forming Plastics, Furubayashi Shiko, NKG and Tokyo Canada Dry; Claim 11 of the patent in suit

(see Exhibit L of Kara-2, Exhibit SL-5 of Yoshida-1; Exhibit SL-4 of Yoshida-1; Affidavits Taka-1 and Taka-2)

3.11 For the reasons set out in the preceding paragraphs these deliveries did not give rise to prior public use of the laminates according to Claim 11 of the patent in suit, irrespective of any other considerations which might lead to the same conclusion (confidentiality, possibility to determine on the shrunken labels the shrinkage characteristics of the laminate before shrinkage).

Deliveries within the USA; Claim 11 of the patent in suit

3.12 The evidence for these deliveries was submitted at a late stage in the appeal proceedings.

3.12.1 The Board concurs with the finding in T 1002/92 (Reasons 3.4, paragraph 7) that in proceedings before the Boards of Appeal new facts, evidence and related arguments, which go beyond the "indication of facts evidence and arguments" presented in the notice of opposition pursuant to Rule 55(c) EPC in support of the grounds of opposition on which the opposition is based, should only very exceptionally be admitted into the proceedings, if such new material is prima facie highly relevant in the sense that it can reasonably be expected to change the final outcome of the case and is thus highly likely to prejudice the maintenance of the opposed patent.

3.12.2 While the Affidavits of Mr Blackwelder, Mr Syperski, Mr Hinckley and Mr Karabedian (= Kara-4), including the Exhibits attached to them, delve in considerable detail into the history of the development of the coextruded Plastishield material by Owens-Illinois, the only concrete evidence they offer with respect to alleged deliveries of coextruded polystyrene label material consists of photocopies of bills of "Lily OI, Division of Owens-Illinois" to Laurens Glass Co. and Brockway Glass Co. (Affidavit of Mr Hinckley, Exhibits A1 to A3, B1 to B3 and C1 to C3, respectively D1 to D3 and E1 to E3).

The information contained in these bills with respect to **what** was sold is, however, restricted to some rather jejune and very meagre statements, like "CO-EXT REX RT BR", "CO-EXT SPRITE" or "CO-EXT MELLO YELLO".

3.12.3 This evidence is far too vague and inconsequential to permit the Board to draw the conclusion that the material that was delivered was indeed made in accordance with the specifications in the "Manual", or, for that matter, in accordance with the requirements of present Claim 11.

3.12.4 The Appellant has thus failed to demonstrate that his late filed evidence was sufficiently relevant to the issue of novelty of the subject-matter of Claim 11 of the patent in suit, i.e. relevant to such an extent as to be highly likely (or even likely) to prejudice the maintenance of the patent (cf. T 1002/92 supra).

3.12.5 These late-filed facts, evidence and related arguments are therefore excluded from the appeal proceedings pursuant to Article 114(2) EPC.

3.13 The entire **novelty** attack based on the **prior public use** of the subject-matter of **Claim 11** of the patent in suit **therefore fails** .

Independent Claims 1 and 10

3.14 While the above considerations relate to the subject-matter of Claim 11 of the patent in suit, the same conclusions apply to the subject-matter of the further independent Claims 1 and 10. These claims comprise the same structural and shrinkage characteristics as Claim 11, the presence of which was decisive for the conclusion of the Board with respect to the novelty of the subject-matter of this latter claim under the aspects of the alleged prior public use.

Objections based on literature

4. ...

4.1 Document (5)

...

5. Novelty

From the facts set out in the preceding paragraph the Board concludes that the subject-matter of all independent claims of the patent in suit is novel over the disclosure in the nearest prior art document (5).

6. Problem and solution

6.1 The problem to solved by the subject-matter of product Claims 1 and 11 of the patent in suit, when starting from document (5), was the provision of a similar composite laminate, suitable for the fabrication of sleeves which can be heat-shrunk onto bottles, said laminate comprising a heat-shrinkable foamed polystyrene layer, where the outer surface of the laminate, that is the surface which faces away from the container wall when a sleeve formed from the laminate is heat-shrunk onto a container (e.g. bottle), should have a good printability and - when the sleeve is shrunk onto a container - be smooth and even.

With respect to process Claim 10, a further aspect of the problem was the development of a method for the manufacture of such a laminate.

6.2 According to the patent in suit the above problem is solved, as far as product Claims 1 and 11 are concerned, by the use of polystyrene as material of the non-foam layer as well as by imparting a certain (low) shrinking capability to this layer, and, as far as process Claim 10 is concerned, a further element of the solution is the manufacture of the two layer laminate by coextrusion.

6.3 From the description of the patent in suit it can be inferred that the laminates prepared according to the independent claims of the patent in suit have very good

printability characteristics and that the sleeves produced therefrom have a smooth and even outer surface (page 7, line 51; page 10, Table II, Experiment 1; page 15, lines 44 to 46). Apparently the coextrusion technique is appropriate, together with the other measures taken, to engender these favourable properties of the laminates.

During the oral proceedings the Appellant admitted that the polystyrene non-foam layer of the laminates of the patent in suit offered an improved printability and that this was not in line with the contents of document (5) which in fact militated against the direct printing of the outer surface of the laminate by recommending that the printing should be covered by a protective film of the non-foam layer. Similarly it stood to reason, and was indeed not contested by the Appellant, that the shrinkability of the non-foam layer, owing to the tension caused by the shrinking process, helped to prevent an uneven surface which might result from an unbalanced correlation of the shrinkabilities of the foam and non-foam layer.

In the absence of any counterevidence, the Board accepts that the above-mentioned technical problem has been effectively solved in all its aspects by the measures required by Claims 1, 10 and 11 of the patent in suit.

7. Inventive step of the subject-matter of independent Claims 1, 10 and 11

7.1 There is nothing in document (5) itself which could be regarded by a skilled person as an incentive to substitute a polystyrene non-foam layer for the ethylene polymer composition-based non-foam layer used according to this document.

7.2 During the written proceedings the Appellant relied upon document (4) in order to demonstrate that one skilled in the art of packaging technology was familiar with

laminates comprising a cellular and a non-cellular layer, both consisting of polystyrene.

While it is correct that document (4) discloses a laminate packaging material comprising an inner layer of foamed polystyrene and two (outer) non-foamed facing layers comprising a copolymer of styrene and butadiene (Claims 1 and 4 to 6; page 2, lines 16 to 47), this material is supposed to be rigid like the cardboard laminates it is replacing, but without the latter's tendency to absorb liquid (page 1, lines 18 to 37; page 2, lines 114 to 122).

Document (4) is totally silent about any shrinkage characteristics of the laminates and thus about the problem of providing, after the shrinking step, an even and smooth surface; it is also silent about the printability characteristics of non-foam layers.

This document therefore does not provide any incentive for a skilled person to substitute polystyrene as material of the non-foam layer of the laminates disclosed in document (5) for the ethylene polymer composition.

For this reason the obviousness objection against Claims 1 and 11, in so far as it is based on the combination of documents (4) and (5), fails.

7.3 However, in order to supplement the features which were missing from the disclosure of document (5), the Appellant also relied on the facts of the alleged **prior public use** in order to establish his case on obviousness. The Appellant contended that it was established beyond any doubt that coextruded polystyrene laminates consisting of a polystyrene foam layer and a polystyrene non-foam layer had been delivered without any obligation of confidentiality before 14 January 1982 (date of the

first priority of the patent in suit) to Gerresheimer. Since these laminates were thus part of the state of the art under Article 54(2) EPC, a skilled person would have been aware of their good printability and would therefore have been encouraged to replace, in the laminates of document (5), the ethylene polymer composition-based non-cellular layer by a non-foam layer made of polystyrene.

Whilst at first blush not altogether unconvincing, this argument also fails for the following reasons.

7.3.1 The materials of consignments G1, G2 and G3 that can be recognized to have been in possession of Gerresheimer and whose composition and internal structure were thus available to the public in the sense set out in the opinion of the Enlarged Board in G 1/92 (OJ EPO 1993, 277), were laminates comprising two layers of polystyrene, one non-foamed and the other foamed, the latter having a surface skin thicker on its side opposite to that laminated to the non-foam layer, and the two layers of the laminate having certain shrinkage characteristics, which might or might not fall within the definitions in Claims 1, 10 and 11 of the patent in suit.

7.3.2 The assertions in item C of the Declaration of Mr Kricheldorf

- that the foils were printed on by Cito Kunststoff und Verpackung GmbH to be used as labels for encircling glass bottles,

- that bottles were labelled under his supervision in Gerresheimer's Düsseldorf plant and

- that a part of the so-labelled bottles was delivered to Teutoburger Mineralbrunnen in 1981,

are not backed by any documentary evidence able to support them or to establish their veracity which, having regard to the subjective character of any such declaration, needs material support, particularly in view of the time lapse of 10 years between the facts alleged to have taken place and the evidence adduced.

The Appellant has therefore failed to establish that the coextruded polystyrene laminates of consignments G1, G2 and/or G3 were delivered to Cito Kunststoff und Verpackungs GmbH before 14 January 1982. He has also failed to prove that the labelled bottles were delivered to Teutoburger Mineralbrunnen prior to this date. Since Cito Kunststoff und Verpackung GmbH, for the purpose of printing the labels, was a contractual partner of Gerrersheimer, it is also reasonable to assume that it was not free to divulge the knowledge it gained from the work it was performing on behalf of and paid for by Gerresheimer, but was bound by either explicit or implicit obligations of confidentiality, as is the normal business relationship in transactions of this kind.

7.3.3 It follows from the above that the evidence adduced by the Appellant fails to establish that printed labels made from the materials of consignments G1, G2 and G3 have been in the public domain before 14 January 1982.

7.3.4 In G 1/92, after having stated in Section 1.4 that:

"An essential purpose of any technical teaching is to enable the person skilled in the art to manufacture or use a given product by applying such teaching. Where such teaching results from a product put on the market, the person skilled in the art will have to rely on his general technical knowledge to gather all information enabling him to prepare the said product. Where it is possible for the skilled person to discover the composition or the internal structure of the product and to reproduce it

without undue burden, then both the product and its composition or internal structure become state of the art."

the Enlarged Board went on to state in Section 3:

"It may be added that a commercially available product **per se** does not implicitly disclose anything beyond its composition and internal structure. Extrinsic characteristics, which are only revealed when the product is exposed to interaction with specifically chosen outside conditions, e.g., reactants or the like, in order to provide a particular effect or result or to discover potential results or capabilities, therefore point beyond the product **per se** as they are dependent on deliberate choices being made. Typical examples are the application as a pharmaceutical product of a known substance or composition (cf. Article 54(5) EPC) and the use of a known compound for a particular purpose, based on a new technical effect (cf. G 2/88, OJ EPO 1990, 93 and 469). Thus, such characteristics cannot be considered as already having been made available to the public."

In line with the above statements in G 1/92, the Board concludes that the printability characteristic of the materials of consignments G1, G2 and G3 was not a property that became available to the public by their mere delivery to Gerresheimer, since this is clearly an extrinsic characteristic requiring interaction with specifically chosen outside conditions.

In this context reference is also made to decision T 267/92 of 4 June 1996 (not published in OJ EPO), in which it was held that the SBSS (short-beam-shear strength) of a fibre-reinforced composite and the tensile strength and yield strength of the matrix material of the composite must be regarded as extrinsic properties, since they depend on an interaction with an external environment. Consequently, a

parameter comprising a ratio of the values of these properties was considered not to be within the implicit disclosure of a prior art document otherwise disclosing the essential characteristics of the subject-matter under consideration (Sections 4.6.2 to 4.7 of the Reasons).

7.3.5 From the conclusion arrived at in point 7.3.3 above, namely that printed labels made of the materials of consignments G1, G2 or G3 did not belong to the state of the art which was available to the public prior to 14 January 1982, and from the fact discussed in point 7.3.4 above that the printing characteristic of the said materials was also not within the public domain before this date, it follows that the person skilled in the art did not have any information concerning the printability of the materials of consignments G1, G2 and G3 at the relevant time.

7.3.6 Therefore, the materials delivered to Gerresheimer did not and could not have led the person skilled in the art wishing to improve the printability of the laminate material according to document (5), which desired improvement was one aspect of the problem underlying the present invention (see point 6.1 above), to replace or try to replace the ethylene polymer composition of the non-foam layer of the laminate according to document (5) by polystyrene.

7.3.7 As to the further aspect of the problem underlying the subject-matter of the patent in suit, i.e. the provision of a smooth and even surface of the non-cellular layer of the material shrunk onto bottles (see again point 5.1 above), this must also be regarded as being an extrinsic characteristic, since its determination requires interaction with outside conditions (thermal shrinking). Furthermore, and as set out above, there remains considerable doubt as to whether Gerresheimer was indeed in possession of label material shrunk onto bottles prior to 14 January 1982.

Applying the requisite standard of proof (paragraph 3.1 supra ibid.) the Board concludes that the surface properties of the label material shrunk onto bottles cannot be regarded as having been in the public domain before that date.

Consequently, the person skilled in the art could not, within the available time ending on 14 January 1982, derive or glean from the materials of consignments G1, G2 and/or G3 any clue as to the possible smoothness and evenness characteristics that these materials would have after they have been shrunk onto bottles.

7.3.8 It follows that the materials of the alleged prior public use could not have led the person skilled in the art, wishing to solve all the product-oriented aspects of the existing problem, to substitute as material of the non-foam layers of the relevant laminate polystyrene for the ethylene polymer compositions used according to document (5).

In consequence, a combination of the information concerning those characteristics of the materials of consignments G1, G2 and G3, which were accessible to the person skilled in the art under the provisions of Article 54(2) EPC, with the disclosure in the nearest prior art document (5), does not render obvious the subject-matter of the independent product Claims 1 and 11 of the patent in suit.

7.3.9 The same conclusion applies to independent process Claim 10, which comprises, in the form of definitions by purpose or functional definitions, the same essential features as Claims 1 and 11.

7.4 Neither of the above-outlined obviousness attacks made by the Appellant on the subject-matter of independent Claims 1 and 11 is, therefore, established.

7.5 Owing to their dependency on independent Claims 1 and 11, respectively, the attacks on Claims 2 to 10, 12 and 13 stand in the same position.

8. In summary, none of the objections pleaded and supported by the Appellant prejudice the maintenance of the unamended patent.

Therefore, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

* This is an abridged version of the decision. A copy of the full text in the language of proceedings may be obtained from the EPO Information Office in Munich on payment of a photocopying fee of DEM 1.30 per page.