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Aktenzeichen / Case Number / N<sup>o</sup> du recours : T 245/86 - 3.3.2

Anmeldenummer / Filing No / N<sup>o</sup> de la demande : 81 901 695.7

Veröffentlichungs-Nr. / Publication No / N<sup>o</sup> de la publication : 0 055 719

Bezeichnung der Erfindung: Polyethylene/metal laminates, methods of making same  
Title of invention: and methods of making articles therefrom  
Titre de l'invention :

Klassifikation / Classification / Classement : B32B 15/08

### ENTSCHEIDUNG / DECISION

vom / of / du 11 May 1989

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet : Metal Box P.L.C.

Einsprechender / Opponent / Opposant : Unilever N.V.

Stichwort / Headword / Référence : Laminates/METAL BOX

EPÜ / EPC / CBE Article 54(3) and (4) EPC

Schlagwort / Keyword / Mot clé : "Novelty (yes)"

Leitsatz / Headnote / Sommaire

Europäisches  
Patentamt

Beschwerdekammern

European Patent  
Office

Boards of Appeal

Office européen  
des brevets

Chambres de recours



Case Number : T 245/86 - 3.3.2

**D E C I S I O N**  
**of the Technical Board of Appeal**  
**of 11 May 1989**

**Appellant :** Unilever N.V.  
**(Opponent)** P.O. Box 760  
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**Representative :** Hutzelmann, Gerhard  
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**Respondent :** Metal Box P.L.C.  
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**Representative :** Sawers, Lawrence Peter  
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**Decision under appeal :** Decision of the Opposition Division of the European  
Patent Office dated 22 July 1986 rejecting  
the opposition filed against European patent  
No. 0 055 719 pursuant to Article 102(2) EPC.

**Composition of the Board :**

**Chairman :** P. Lançon

**Members :** A. Nuss

E. Persson

## Summary of Facts and Submissions

I. European patent No. 0 055 719 was granted on 2 January 1985 with twenty-one claims in response to European patent application No. 81 901 695.7, filed on 25 June 1981 and claiming priority of an earlier application of 26 June 1980 (GB-8 020 893). Independent Claim 1 reads as follows:

1. A laminated structure consisting of at least one layer of a polyethylene copolymer and at least one layer of a metal, the or each polyethylene copolymer layer being bonded directly to a surface of a metal layer, characterised in that the polyethylene copolymer is a linear low density polyethylene copolymer having a density in the range from 0.91 to 0.94 g.ml<sup>-1</sup> and a melt flow index in the range 0.2 to 2.0 g/10 min, produced by low pressure co-polymerisation of ethylene and but-1-ene.

II. The Appellant (Opponent) filed a notice of opposition against the European patent on 26 September 1985 requesting revocation of the patent on the grounds, *inter alia*, that its subject-matter lacked novelty. The opposition was supported by a single document, namely the European patent application No. EP-A-23 389 (1) published on 4 February 1981 and claiming priority of an earlier application of 27 July 1979 (GB-A-7 926 306).

III. The Opposition Division rejected the opposition by a decision of 22 July 1986, which states in essence that document (1), which is state of the art by virtue of Articles 54(3) and (4) EPC, does not describe a laminate corresponding with that of Claim 1 of the present patent as granted.

- IV. The Appellant lodged an appeal against this decision in a letter filed on 31 July 1986 and paid the appeal fee at the same time. The Statement of Grounds of Appeal was filed in a subsequent letter received on 15 November 1986 in which the following argument was submitted:

Claim 1 lacks novelty because in document (1) the alpha-mono-olefin component of the ethylene copolymer layer may be butene-1 as a preferred comonomer, whereby the density of the ethylene polymer is comprised in the range from 0.910 to 0.980 g/cm<sup>3</sup> and the melt flow index in the range from 1.5 to 2.0 g/10 minutes.

- V. In response thereto the Respondent stated that document (1) describes a different kind of laminate, namely one which essentially comprises three different layers, as correctly stated by the Opposition Division in point 3 of the reasons for the decision.
- VI. In a communication of the Board dated 2 February 1988, the preliminary opinion was expressed that the subject-matter of Claim 1 of the disputed patent was novel.

However, the Appellant did not reply to the invitation of the Board to file observations on this communication, whereas the Respondent declared that he fully agreed with it.

- VII. The Appellant requests that the patent be revoked.

The Respondent requests that the appeal be dismissed.

### Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. The only issue retained by the Appellant before the Board is the question of novelty of Claim 1. Since the Board in this case has no reason to examine of its own motion any of the other issues raised by the Appellant at the stage of opposition, the present decision will solely deal with this one issue.
3. As already laid down in the Board's communication, document (1), which is only state of the art when considering novelty (Articles 53(3) and (4) EPC), describes a laminate which necessarily comprises three different layers, namely (a) a substrate layer of a polymer or copolymer of an alpha-olefin having 2 to 6 carbon atoms, (b) an adjacent adherent layer of a random copolymer of ethylene with an alpha-mono-olefin having from 3 to 6 carbon atoms, wherein the density is from 0.910 to 0.980 g/cm<sup>3</sup> and the melt flow index from 1.5 to 10.0 g/10 min, (butene-1 is a preferred comonomer), and (c) a metallic layer on the surface of the adherent layer remote from the substrate (see Claims 1 to 4). Such a laminate is thus characterised by a basic pattern or structure which is not the same as that described in the patent in suit. Document (1) leads to laminated structures which basically differ from the claimed ones in that they contain a combination of two different polymer layers (adherent layer/substrate layer) with a metallic layer, the latter being deposited onto the adherent layer remote from the substrate. The adherent layer is thus always situated between the metallic layer and the substrate layer, such as illustrated by Figures 1 to 3 (see also page 7, lines 26 to 33 and page 9, lines 1 to 25 of the description), which leads to the following

typical structures: metal/adherent layer/substrate layer (see Figure 1), metal/adherent layer/substrate layer/(polymeric) material (see Figure 2) and metal/adherent layer/substrate layer/adherent layer/metal (see Figure 3).

However, the claimed laminated structures consist of only two types of layers: (a) a metal and (b) a linear low density polyethylene copolymer (LLDPE), viz. a copolymer of ethylene and butene-1, produced by low pressure copolymerisation and having a density in the range from 0.91 to 0.94 g/ml and a melt flow index in the range of 0.2 to 2.0 g/10 min. Any other kind of layer is excluded from the laminate as claimed, since according to Claim 1 the or each polyethylene copolymer layer is bonded directly to a surface of a metal layer. Claim 1 thus concerns laminated structures such as polyethylene copolymer/metal, polyethylene copolymer/metal/polyethylene copolymer and metal/polyethylene copolymer/metal (see page 2, lines 52 to 56 of the patent in suit).

It follows from the above that the laminated structures in accordance with the patent in suit are in any case different from those described in document (1). Under the circumstances, the question whether the adherent layer used in the cited document is made of the same copolymer as the one used in the patent in suit (i.e. LLDPE) is not relevant.

4. In view of the Appellant's silence to the communication of the Board, the above findings remain uncontested and the Board has therefore no reason to reconsider them.

Consequently, the novelty of Claim 1 is to be confirmed.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

F.Klein

P.Lançon