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Aktenzeichen / Case Number / N° du recours : T 383/87 - 3.3.2

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Bezeichnung der Erfindung: Oriented polypropylene with linear low density  
Title of invention: polyethylene copolymer coating  
Titre de l'invention :

Klassifikation / Classification / Classement : B32B 27/32

### ENTSCHEIDUNG / DECISION

vom / of / du 26 April 1989

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet :

Mobil Oil Corporation

Einsprechender / Opponent / Opposant :

N.V. DSM

Stichwort / Headword / Référence : Thermoplastic film/MOBIL OIL

EPÜ/EPC/CBE Articles 54, 56, 104(1) and 116(1) EPC

Schlagwort / Keyword / Mot clé :

"Novelty - no true relevant document"  
"Inventive step - no basis for challenging  
interlocutory decision"  
"Oral proceedings - right of any party -  
apportionment of costs (refused)"

Leitsatz / Headnote / Sommaire

Europäisches  
Patentamt

Beschwerdekammern

European Patent  
Office

Boards of Appeal

Office européen  
des brevets

Chambres de recours



Case Number : T 383/87 - 3.3.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.2  
of 26 April 1989

**Appellant :**  
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**Decision under appeal :** Interlocutory decision of the Opposition Division of  
the European Patent Office dated 29 July 1987,  
concerning maintenance of European patent  
No. 0 002 606 in amended form.

**Composition of the Board :**

**Chairman :** P. Lançon  
**Members :** A. Nuss  
R. Schulte

## Summary of Facts and Submissions

- I. European patent No. 0 002 606 was granted on 21 April 1982 with four claims in response to the European patent application No. 78 300 803.0, filed on 13 December 1978.
- II. The Appellant (Opponent) filed notice of opposition against the European patent on 21 January 1983, requesting revocation of the patent on the grounds that its object lacked either novelty or inventive step.

From the seven documents cited by the Appellant in the course of the opposition proceedings, he only referred to the following two when defending his case at the oral proceedings before the Board:

(4) GB-A-1 440 317

(7) JP-A-52-68279.

- III. The Opposition Division rejected the opposition by the interlocutory decision of 29 July 1987 and decided to maintain the patent in amended form with the text as notified to the parties in the communication pursuant to Rule 58(4) EPC issued on 10 March 1987. The amended claims differed from the claims as granted mainly in that Claim 1 had been amended to clarify that the term "polypropylene" does not include polypropylene-containing materials such as copolymers and blends and that "octene" in fact meant "octene-1". A small consequential amendment was further made in Claim 2, whilst Claim 4 had been amended by inserting the omitted word "film" after "a laminar thermoplastic".

- IV. In its decision, the Opposition Division considered that in comparison to the heat-sealable laminates described in document (4), the claimed films had a far higher heat-seal strength, as demonstrated by the test results in Respondent's letter dated 10 July 1986. There was no indication in document (4) that the use of the particular  $\alpha$ -olefins octene-1 and 4-methyl-pentene-1 would produce the desired result. The same also applied to document (7). The Opposition Division therefore considered that the claimed invention was based on an inventive selection.
- V. The Appellant lodged an appeal against this decision in a letter filed on 7 October 1987 and paid the appeal fee at the same time. The Statement of Grounds of Appeal filed by telefax on 2 December 1987, was confirmed in a letter received on 4 December 1987.

The Appellant argued in his notice of appeal that Claim 1 lacked novelty in that document (7) fully disclosed one of the compositions used as a second layer in the claimed laminates, i.e. the one which consisted of a linear copolymer of ethylene and 4-methyl-pentene-1. The second composition lacked inventive step for the reason that in this document it was mentioned that copolymers of ethylene and  $\alpha$ -olefins having 4 or more carbon atoms could be used and that, in addition, table 1 in the patent in suit showed that the technical effect obtained by selecting octene-1 as  $\alpha$ -olefin, was lesser than that obtained with the known 4-methyl-pentene-1.

- VI. Contesting this view, the Respondent (Proprietor of the patent) stressed that in document (7), it was neither disclosed that the copolymer in question was a linear one having the low density indicated in the claim, nor that it was prepared in the presence of a stereospecific catalyst. This document only taught that a propylene-butene-1

copolymer with a high butene-1 concentration gave very good ink adhesion. The table enclosed in the document further showed that such materials at best maintained heat-seal bond and transparency, but there was no improvement demonstrated in these latter properties.

VII. Oral proceedings took place on 26 April 1989, during which the parties confirmed their previous submissions and made, essentially, the following ones in addition.

- (i) The Appellant submitted that in contrast to his previous position before the Opposition Division, the novelty of Claim 1 could be challenged on the basis of document (7), if the invention was to be seen in a selection, which was in fact a matter of novelty. As might be seen from page 4 of this document, there were only five possibilities for composing the second layer. Moreover, example 3 of document (4) showed that the claimed laminates provided no advantage over the prior art, since a figure of 1000 for heat seal strength was already shown for a laminate in this prior document. The claimed means for providing heat-seal strength, i.e. octene-1 or 4-methyl-pentene-1 instead of the known butene-1 as alpha-olefinic comonomer, was therefore no more than an obvious substitution. Although this had not been mentioned in the notice of appeal, it had already been submitted previously in the proceedings before the first instance. This issue was thus not new.
  
- (ii) The Respondent stressed that the novelty question had already been settled in the course of the opposition proceedings (see decision and minutes of oral proceedings) and that, furthermore, at the stage of appeal, the Appellant reverted to document

(4) for the first time at the instant oral proceedings. In his opinion, the Appellant introduced thus new arguments into the proceedings. He further stated that although this document was the most relevant one, the experimental data filed on 10 July 1986 however showed that under identical sealing conditions the selection of octene-1 and 4-methyl-pentene-1 not mentioned in the prior document led to a consistently greater heat-seal strength as could be expected from what was disclosed in document (4). In addition, the late filed document (7), which had been admitted by the Opposition Division, should have been disregarded without giving detailed reasons. The Respondent finally underlined that until now no experimental data had been produced by the Appellant in support of his unsubstantiated allegations, although the burden of evidence actually laid on the opponent. He considered it therefore justified to claim that a contribution to the costs incurred in oral proceedings be awarded to him.

VIII. At the end of the hearing before the Board, the Appellant requested that the decision under appeal be set aside and that the patent be revoked. The Respondent requested that the appeal be dismissed and that a substantial contribution to the costs incurred in oral proceedings be awarded.

The claims considered during the oral hearing were those on which the Opposition Division had based its interlocutory decision. Independent Claim 1 reads as follows:

1. A laminar thermoplastic film comprising an oriented thermoplastic base layer, whereof the thermoplastic material consists of polypropylene, having on at least one side thereof, a layer of a linear copolymer of ethylene and octene-1 or 4-methyl-pentene-1 prepared by polymerization in the presence of a stereospecific catalyst, said copolymer having a density of from 0.900 up to 0.939 gram per cc, and comprising at least 90% by weight of ethylene.

#### 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 amendments to Claims 1, 2 and 4 as granted (see point III above) raise no objections on formal grounds under Articles 123(2) and (3) EPC, since they are adequately supported by the original description (see column 3, line 39 ff. and examples 4-5 of the patent in suit) and manifestly do not broaden these claims. This is not contested by the Appellant.
3. The patent in suit is concerned with laminar thermoplastic films comprising an oriented polypropylene base layer having on at least one side thereof a linear low density polyethylene copolymer coating and which exhibit a high level of heat-seal strength (see column 3, lines 39 to 41 and lines 55/56).

Document (4), which is undoubtedly the closest prior art document, relates to heat-sealable oriented plastic films comprising an oriented polypropylene film having on at least one surface a heat-sealable layer of a predominantly linear random copolymer of ethylene with at least one

further  $\alpha$ -olefin having at least three carbon atoms per molecule. The copolymer may be formed under conditions which favour the formation of linear chains of ethylene units with little branching and random distribution of the comonomer along the chains, for example low pressure catalytic conditions which are used in the polymerisation of ethylene to form high density polyethylenes in the presence of an organometallic catalyst (Ziegler type catalyst) or a transition metal oxide catalyst. The only further specifically mentioned  $\alpha$ -olefin to be used for preparing the copolymer of ethylene are propylene or butene-1 (see page 1, lines 41 to 80).

A laminated film obtained with propylene as comonomer heat-sealed to itself at 118°C under a pressure of 14 psi for one second to give a heat-seal strength of 700 g per 38 mm of film. With butene-1 as comonomer, the laminate obtained heat-sealed to itself at 120°C under the same operating conditions to give a heat-seal strength of 1000 g per 38 mm of film (see examples 2 and 3).

4. The technical problem in respect of the closest prior art consisted in providing laminar thermoplastic films comprising an oriented thermoplastic base layer of polypropylene, with improved heat-seal strength (see last paragraph of this point).

In order to solve this problem, the patent in suit proposes laminates having on at least one side of the polypropylene base layer, a layer of a linear copolymer of ethylene and octene-1 or 4-methyl-pentene-1 as defined in present Claim 1.

On the one hand, in the present case a direct comparison between Example 3 of document (4) and the figures submitted by the Respondent is meaningless in view of



the many possible origins for variations of the effect, i.e. the resulting heat-seal strength. On the other hand, however, the experimental data filed on 10 July 1986 by the Respondent in an "Annex" to his letter, show that under identical measuring conditions, the claimed laminates far out-perform those obtained according to the closest prior art, i.e. document (4) (see T 197/86, to be published in OJ EPO). Therefore, these tests, which were not challenged by the Appellant, confirm that the problem is indeed solved by the above proposal.

5. The Appellant cannot be heard with the argument that document (7) is detrimental to the novelty of Claim 1.

5.1 This document discloses polypropylene composite films comprising a base layer (layer A) and at least a further layer (layer B). Layer A may be polypropylene, or a copolymer of propylene and ethylene or a mixture of polypropylene with another polyolefine (polyethylene, ethylene-propylene copolymer, polybutene-1, poly-4-methylpentene-1) whereby the propylene moiety represents more than 80% by weight (see page 1, last full paragraph and page 3, line 15 ff.). Layer B is a copolymer of ethylene or/and propylene with 1-50%, preferably 2-8% of an  $\alpha$ -olefin having 4 or more carbon atoms. Examples for these copolymers are ethylene-butene-1 copolymer, ethylene-hexene-1 copolymer, ethylene-4-methylpentene-1 copolymer, propylene-butene-1 copolymer and propylene-4-methylpentene-1 copolymer (see page 4, lines 1 to 13). In working example 1, a three layer laminate comprising a base layer A of polypropylene and two layers B of propylene-butene-1 copolymer with a butene-1 content of 20% by weight, is described (see page 11).

5.2 However, the substitution of layer(s) B of the working example by the ethylene-4-methylpentene-1 copolymer disclosed in the description part of document (7) can by no means lead to a laminate such as defined in Claim 1 of the patent in suit in view of the much lower percentage of comonomer (at most 10%) used in the latter in conjunction with ethylene.

Moreover, it is nowhere mentioned in document (7) how the layer B copolymers are prepared and it is thus not possible to know whether these copolymers are high density or low density resins, whether they are linear or branched. In the absence of any information concerning the polymerization conditions (e.g. temperature, pressure, catalyst) the properties of the copolymers remain thus entirely unknown and the Board has, therefore, no reason to believe that document (7) discloses a laminate falling under present Claim 1.

Since in opposition proceedings the onus of proof is on the opponent (see decision T 219/83 OJ EPO 1986, p. 211, point 12) and not on the patentee, it is indeed not sufficient in opposition proceedings for the opponent to impugn a granted patent more than three years after the opposition period has elapsed on the basis of a document which does not provide sufficient detailed information in order to establish a true relevance in respect of the novelty of the claimed object. The Appellant's novelty objection is clearly based on an imputation for which there is no basis in document (7), namely that the copolymers in question are all linear, low density

polyethylene copolymers and the Appellant has therefore to accept in the present case that document (7) is given purely literal interpretation, with the consequence that it cannot be considered to be detrimental to the novelty of the present claims.

6. In the absence of further objections to the novelty of the claims, it still remains to be examined whether the requirement for inventive step is met by the claimed solution to the technical problem as indicated in paragraph 4 above.

6.1 The Appellant neither contested the validity of the experimental results submitted by the Respondent during opposition proceedings (see letter dated 10.7.86), nor contested that document (4) represented the most relevant state of the art. The assessment of inventive step therefore boils down to decide whether or not a man skilled in the art would have selected octene-1 or 4-methyl-pentene-1 in order to improve heat-seal strength.

However, in view of the fact that at the oral proceedings before the Board the Appellant referred to his previous submissions before the first instance and merely repeated what seemed to be his most salient argument, namely that in example 3 of document (4) the figure of 1000 for heat-seal strength of this known laminate indicated that the claimed laminates provided no advantage over the prior art, with the consequence that the substitution of butene-1 by said two comonomers was obvious, the Board wants to point out that, on the one hand, as correctly explained in the decision of the first instance, this result cannot be compared with the experimental results of 10 July 1986

submitted by the Respondent because the conditions were obviously not the same for both sets and that, therefore, each set of results was only consistent within itself, whereas on the other hand, the experimental results show an unexpected improvement over the prior art.

6.2 Under these circumstances, the Board considers that there exists no basis for challenging the findings of the first instance with regard to inventive step (see point 6 of the decision of 29.7.87), which the Board hereby endorses, all the more document (7) is even less relevant as conceded by the Opposition Division (see point 5.2 above).

7. It follows from the above that there are no grounds which prejudice the maintenance of the patent in the form proposed by the Opposition Division in the communication pursuant to Rule 58(4) EPC dated 10 March 1987.

8. The appeal being unsuccessful, the Respondent's objections in connection with an alleged irregular consideration of both documents (4) and (7) (see point VII, (ii) above) have become purposeless since none of the contested actions was prejudicial to the Respondent. The Board could not, moreover, detect any flaw in this respect.

9. The Board sees no reason to meet Respondent's request to be awarded a substantial contribution to the costs incurred in oral proceedings. Although it may be derived from the preceding paragraphs that the chance for the Appellant to win his case before the Board of Appeal was small, it cannot be ignored that Article 116(1) EPC provides, inter alia, that "oral proceedings shall take place ... at the request of any party to the proceedings". In the opinion of the Board, this basic right conferred by the EPC to any party to the proceedings before the EPO,

could therefore be refused only under most exceptional circumstances, amounting to an abuse of law, which would make it equitable to award costs against one of the parties. Even supposing the opinion of the Respondent were right concerning the quality of the appeal, this consideration alone could never be a reason for ordering a different apportionment of costs incurred within the meaning of Article 104(1) EPC. This is because Article 116(1) EPC guarantees the right of any party to request oral proceedings, i.e. to argue his case orally before the relevant instance of the EPO. It may be that a party has the feeling that he can present his case better orally than in writing, even if he has no new arguments. It is then his genuine right to ask for oral proceedings without being inhibited by the fear of having to pay additional costs, unless the request for oral proceedings is a clear abuse of law. As no such abuse can be seen in the present case the request for a different apportionment of costs was to be refused.

Order

For these reasons, it is decided that:

1. The appeal is dismissed;
2. the request to order a different apportionment of costs incurred in oral proceedings is refused.

The Registrar



The Chairman

