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Datasheet for the decision of 29 January 2013

Case Number: T 0401/11 - 3.3.09

Application Number: 01129534.2

Publication Number: 1215043

IPC: B32B 27/36, C08J 5/18, C08L 67/02

Language of the proceedings: EN

Title of invention:
Polyester film and magnetic recording medium using the same

Patent Proprietor:
TORAY INDUSTRIES, INC.

Opponent:
Teijin DuPont Films Japan Limited

Headword:
-

Relevant legal provisions:
EPC Art. 56, 83
RPBA Art. 13(3)

Keyword:
"New objection - not admitted"
"Sufficiency - yes"
"Inventive step - yes"

Decisions cited:
T 0939/92

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0401/11 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 29 January 2013

Appellant: (Opponent)
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Respondent: (Patent Proprietor)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 25 November 2010 rejecting the opposition filed against European patent No. 1215043 pursuant to Article 101(2) EPC.

Composition of the Board:

Chairman: W. Sieber
Members: J. Jardón Álvarez
K. Garnett

Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent against the decision of the opposition division to reject the opposition against the European patent No. 1 215 043 in the name of TORAY INDUSTRIES, INC.

II. The patent was granted with 30 claims, independent claims 1, 26, 29 and 30 reading as follows:

"1. A polyester film comprising:
a polyester resin; and
a thermoplastic resin other than a polyester resin;
wherein the number H1 of coarse projections having a height of 0.28 µm or more per 100 cm^2 of at least one surface of the polyester film, and the number H2 of coarse projections having a height of 0.56 µm or more per 100 cm^2 of said at least one surface of the polyester film satisfy the conditions:
$0 \leq H1 \leq 100$ and $0 \leq H2 \leq 10$."

"26. A magnetic recording medium comprising:
a polyester film according to Claim 1; and
a magnetic layer provided on at least one surface of the polyester film."

"29. A digital recording type cassette tape comprising a magnetic recording medium according to Claim 26."

"30. A method for manufacturing a polyester film comprising:
a step of filtrating a polymer mixture comprising a polyester resin and a polyimide resin through a

fiber sintered stainless steel filter having a cut of 1.2 µm or less in an extruder;
a step of melt-extruding the polymer mixture through an extruding die for forming an unstretched film by using the extruder;
a step of stretching the unstretched film in the longitudinal direction at a stretching temperature of Tg + 10°C to Tg + 30°C, at a stretching ratio of 2.5 to 4.0, and at a stretching rate of 50,000%/minute to 200,000%/minute in at least two stages;
a step of stretching the stretched film in the width direction at a stretching temperature of Tg + 10°C to Tg + 50°C, at a stretching ratio of 3.0 to 4.5, and at a stretching rate of 2,000%/minute to 10,000%/minute;
a step of further stretching the stretched film in the longitudinal direction at a stretching temperature of Tg + 30°C to Tg + 50°C, and at a stretching ratio of 1.2 to 1.8;
a step of further stretching the stretched film in the width direction at a stretching temperature of Tg + 80°C to Tg + 110°C, and at a stretching ratio of 1.2 to 2.0; and
a step of performing heat treatment at a temperature of Tg + 100°C to Tg + 125°C for 0.2 to 10 seconds."

Claims 2 to 25, 27 and 28 were dependent claims.

III. A notice of opposition against the patent was filed by Teijin DuPont Films Japan Limited (opponent) on 21 December 2006 requesting revocation of the patent in

its entirety based on Article 100(a) EPC (lack of novelty and inventive step) and Article 100(b) EPC.

The documents cited during the opposition proceedings included:

D1: EP 0 985 701 A1;

D5: JP 2001-226502 A and English translation thereof; and

D6: JP-7-241972 A and partial English translation thereof.

IV. With its decision announced orally on 8 October 2010 and issued in writing on 25 November 2010, the opposition division rejected the opposition.

The opposition division found that the claimed invention was sufficiently disclosed. In particular the opponent had not submitted any convincing evidence showing that a film made of a composition falling within the scope of granted claim 1 would not be workable.

The opposition division acknowledged novelty of the claimed subject-matter over the disclosure of D5, a document which became state of the art pursuant to Article 54(2) EPC because the patent was not entitled to the claimed priorities.

The opposition division did not admit document D6 into the proceedings because the partial translation filed

was seen as no more relevant than the other documents already on file.

Starting from D1 as the closest prior art, the subject-matter of claim 1 was held to involve an inventive step. The objective technical problem over D1 was to modify the films of D1 in order to achieve improved magnetic properties. This was solved by the limitation of the number of coarse projections, H1, which had neither been described nor hinted at in the available prior art. Concerning the subject-matter of claim 30 the opposition division reformulated the objective problem as being how to modify the teaching of D1 in order to provide a method of manufacturing a polyester film with improved magnetic properties. Since the opponent had not shown that a modification of the process of D1 would inevitably lead to films with better magnetic properties, an inventive step was also acknowledged for the process claim.

V. On 1 February 2011 the opponent (in the following: the appellant) lodged an appeal against the decision of the opposition division and paid the prescribed fee on the same day. With the statement setting out the grounds of appeal, filed on 31 March 2011, the appellant requested that the decision under appeal be set aside and that the patent be revoked on the grounds that the patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC) and on the grounds that the subject-matter of all the claims lacked an inventive step (Article 100(a) EPC).

The appellant also filed with its statement of grounds of appeal a complete English translation of document D6 and further experimental evidence:

D6: JP-A-7-241972 and complete English translation thereof; and
D7: Experimental report of Mr. Makoto Handa dated 10 February 2011 (5 pages).

VI. With its reply dated 9 August 2011 the patent proprietor (in the following: the respondent) disputed the arguments submitted by the appellant and requested that the appeal be dismissed or, alternatively, that the patent be maintained in amended form with the enclosed claims according to auxiliary requests 1 or 2.

The respondent also filed the following further document:

D8: Internet page http://en.wikipedia.org.wiki/ Polystyrene.

VII. On 18 September 2012 the board dispatched the summons to attend oral proceedings. In the annexed communication the board indicated the points to be discussed during the oral proceedings.

VIII. By letter dated 28 December 2012 the respondent filed additional arguments. It further filed an amended set of claims as first auxiliary request and renamed the previous auxiliary requests as its second and third auxiliary requests. In addition, the respondent filed technical data concerning the polyetherimide resin used in the examples of the patent, i.e. ULTEM® 1010:

D9: Technical Data Sheet of ULTEM® 1010 (3 pages).

IX. Oral proceedings before the board were held on 29 January 2013. During the oral proceedings the appellant requested to amend its case by introducing an argument based on data in the priority documents. After discussion and deliberation, the board refused the appellant permission to amend its case as requested.

X. The arguments presented by the appellant, insofar as they are relevant for this decision, may be summarised as follows:

– The skilled person would not be able to reproduce the invention across the whole scope of the claims. The submitted experimental evidence, D7, wherein syndiotactic polystyrene had been used in place of "Ultem® 1010", resulted in films not falling within the scope of the claim. Consequently, it was not possible to reproduce a film having the properties recited in claim 1 when a thermoplastic resin different from a polyetherimide was used.

– The claims of the patent were overly broad. There was no evidence whatsoever in the opposed patent which supported the case that the alleged advantages were achieved where the thermoplastic resin was a resin other than a polyimide resin. in this context, reference was made to T 0939/92 (OJ EPO 1996, 309).

– D1 was the closest prior art for assessing the inventive step of the subject-matter of claim 1.

The polyester film of claim 1 differed from the disclosure of D1 only by the additional requirement that the number of coarse projections H1 satisfied the specific conditions specified. However, the patent did not include data which demonstrated that this difference was associated with an improvement in the number of drop-outs. But even if an improvement were achieved, the claimed subject-matter would still lack an inventive step. There was a clear teaching in D1 that the presence of coarse particles was undesirable and the total number of such projections should be minimised. Thus, the skilled person would have aimed at the presence of no coarse projections, an embodiment which fell within the scope of claim 1.

– Additionally, the subject-matter of claim 1 was also obvious from a combination of D1 with D6. D6 indicated that the number of coarse projections should be minimized and the skilled person following the preferred teaching of D6 would have arrived at the values of H1 and H2 of claim 1.

– The subject-matter of claim 30 lacked inventive step over the disclosure of D1 or D5.

XI. The arguments presented by the respondent may be summarised as follows:

– The respondent agreed with the reasoning in the appealed decision that the patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person

skilled in the art. Concerning the further experimental evidence, D7, the respondent stated that it was of no great surprise to a person skilled in the art that an exact repetition of examples 1 and 2 of the patent with syndiotactic polystyrene instead of ULTEM® 1010 would result in films not fulfilling features H1 and H2 of claim 1. It would have been clear to a person skilled in the art that it was not possible to simply replace one component of the polymer alloy with another one that had completely different properties without adapting the film preparation conditions to those properties. In fact, there was a clear teaching in the patent that the conditions for the preparation of the polyester films needed to be considered and adapted to the resins used.

– Concerning inventive step of the subject-matter of claim 1 the respondent also saw the disclosure of D1 as representing the closest prior art. In its view the technical problem to be solved by the patent in suit was the provision of a polyester film having improved electromagnetic conversion characteristics, deposition stability and deposited magnetic tape property. The examples and comparative examples in the specification showed that this problem had been credibly solved by the features of claim 1. There was no hint in either in D1 or D6 to the claimed number of coarse projections and consequently the subject-matter of claim 1 involved an inventive step.

– Neither D1 nor D5 suggested the features of the method of claim 30, which was therefore not

obvious to a person skilled in the art in view of the cited documents.

XII. The appellant requested that the decision under appeal be set aside and the patent be revoked.

XIII. The respondent requested that the appeal be dismissed or alternatively, as first auxiliary request, that the patent be maintained according to auxiliary request 1 filed with letter dated 28 December 2012, alternatively, as second and third auxiliary requests respectively, according to auxiliary requests 1 and 2 filed on 9 August 2011 with the reply to the statement of grounds of appeal.

Reasons for the Decision

1. The appeal is admissible.

MAIN REQUEST

2. *Procedural matters*

2.1 During the oral proceedings before the board the appellant sought to rely for the first time in the proceedings on the disclosure of the priority documents of the patent in order to demonstrate that the features concerning the numbers H1 and H2 of coarse projections in claim 1 did not provide adequate support for any improvement of the magnetic properties of the claimed films.

2.2 The appellant accepted that this was a completely new point not raised before but asked the board to admit it into the proceedings due to its relevance, even if its admittance would result in an adjournment of the oral proceedings.

2.3 The respondent on the other hand requested that the new attack be not admitted into the proceedings as it could not react to it without discussing the issues with its client, something which would necessitate an adjournment.

2.4 In the present case the appellant had argued during the opposition proceedings that the patent was not entitled to the claimed priority. The opposition division confirmed this point in its decision and the respondent did not dispute this finding during the appeal proceedings. Thus the priority documents were already known to the appellant from the beginning of the opposition proceedings. There was therefore no justification for raising this point based on the priority documents at this late stage of the proceedings.

2.5 The admission of such a new objection at this very late stage of the proceedings would clearly disadvantage the respondent and would have required an adjournment.

2.6 For these reasons the introduction of this amendment to the appellant's case at such a late stage of the proceedings was not admitted, in accordance with Article 13(3) RPBA.

3. *Sufficiency of disclosure*

3.1 The patent relates to polyester films for use in magnetic recording media. The films of claim 1 present the following features:

a) a polyester resin;
b) a thermoplastic resin other than a polyester resin;
c) the number H1 of coarse projections having a height of 0.28 µm or more per 100 cm^2 is ≤ 100; and
d) the number H2 of coarse projections having a height of 0.56 µm or more per 100 cm^2 is ≤ 10.

The specification includes information concerning the polyester resin (paragraphs [0025]-[0029]) and the thermoplastic resin (paragraphs [0030]-[0048]) used. It further includes methods for manufacturing the films having the required values of coarse projections H1 and H2 (paragraphs [0108]-[0130]) and 19 worked examples of films fulfilling the requirements of claim 1 as well as 15 comparatives examples of films outside the scope of claim 1.

3.2 The appellant does not dispute that the patent discloses a method for preparing a film as claimed. However it argues that the requirements of sufficiency of disclosure are not fulfilled because the subject-matter of claim 1 is extremely broad. In fact, claim 1 embraces the use of any thermoplastic resin other than a polyester resin while in all the working embodiments the thermoplastic resin is a commercially available polyetherimide, namely "Ultem® 1010".

In order to support this objection the appellant filed with the grounds of appeal the experimental report D7. In this report, examples 1 and 2 of the patent in suit were repeated with the only difference that syndiotactic polystyrene was used in place of Ultem® 1010. The results in D7 show that the use of syndiotactic polystyrene under the conditions of examples 1 and 2 of the patent yields films wherein the number of coarse projections H1 and H2 is outside the ranges recited in claim 1.

3.3 Thus, the questions to be answered in relation to sufficiency of disclosure in the present case are:

– whether the skilled person is taught by the specification of the patent in suit, or would have known by applying general knowledge, how to prepare films with a thermoplastic resin different from the exemplified Ultem® 1010; and

– whether the information in the patent or its general knowledge would allow the skilled person to transform the failure of the examples of D7 into success.

3.4 Concerning the first question the board agrees with the decision under appeal (point 2.2.2 of the reasons) that there is fairly detailed information in the patent specification as to which thermoplastic resins can be used for the film formation. Firstly, there are general considerations relating to the glass transition temperature and compatibility between the polyester and the thermoplastic resin in paragraphs [0030], [0031] and [0034]. Secondly, as regards specific examples for

the thermoplastic resin, paragraph [0033] refers to a polyimide resin including polyetherimide resin, a polysulfone resin and a polyethersulfone resin. Hence, the board agrees with the decision under appeal and the respondent that the patent specification discloses both functional and compositional criteria relevant to the selection of the thermoplastic resin.

3.5 The board agrees also with the respondent that the skilled person in the field already knows that the manufacturing conditions for the preparation of the films need to be considered and adapted depending on the thermoplastic resin used.

3.5.1 This is already clear from the prior art in the proceedings. Thus, in document D5, wherein a similar film comprising a polyester and a thermoplastic resin other than a polyester is prepared, it is stated that "the manufacturing conditions differ according to the polyester (polymer 2) and the thermoplastic resin (polymer 1) in use and the structure of the laminate" (D5, paragraph [0100]). Similar information is provided in D1 wherein it is stated that the production method is changed to suit the raw materials used (D1, paragraph [0048]).

3.5.2 This is further explained in the patent specification wherein the reasons for the formation of coarse projections are discussed and as to how this formation should be avoided. Coarse projections are formed by insufficient compounding (see [0100]), by thermal degradation (see [0112]) and by not enough dispersion of the polymers (see [0114]). The specification also teaches that the formation of coarse projections is

reduced by repeated filtration (see [0112] and [0115]) and that void formation can be reduced by controlling the stretching temperature, which should be adapted to the glass transition temperature of the polymer alloy forming the film (see [0120]-[0124]).

3.5.3 Thus, the specification contains enough information of how to prepare the films and how to adapt the manufacturing conditions in view of the properties of the starting materials used.

3.6 Concerning the second question, the board also agrees with the respondent that it is clear for a person skilled in the art from the teaching of the patent discussed above that a repetition of the examples in the patent but using different resins would not automatically result in films having the desired amounts of coarse particles H1 and H2 and that the manufacturing process would have to be adapted according to the properties of the resin used.

3.6.1 The syndiotactic polystyrene used in D7 has a glass transition temperature T_g of 100°C and a melting temperature T_m of 270°C while the resin Ultem® 1010 used in the examples in the patent has a T_g of 216°C. In the technical data sheet D9 a melting temperature of 350 to 400°C for Ultem® 1010 is disclosed. Applying these properties on the film forming steps in examples 1 and 2 of the patent in suit and reference examples 1 and 2 of D7 it can be seen that in the melt-extrusion step for the production of the master pellets, which was conducted at 285°C and 290°C respectively, the syndiotactic polystyrene is completely molten whereas the Ultem® 1010 is only softened but not molten, as the

melt extrusion temperature is below the melting point of Ultem® 1010. Filtering only makes sense for a composition containing Ultem® 1010 for removing coarse Ultem® 1010 particles in order to obtain master pellets in which the Ultem® 1010 particles are well dispersed, as shown by transmission electron microscopy in paragraph [0186] of the patent. Syndiotactic polystyrene has a very high crystallinity and crystallisation velocity so that it can be assumed that after cooling the filtered polymer melt of the master pellets below the T_m of syndiotactic polystyrene in a first step, particles of syndiotactic polystyrene were formed, so that filtering at this stage was ineffective.

3.6.2 Further, the temperature of the stretching steps has to be adapted to the T_g of the polymer alloy as discussed in paragraphs [0120]-[0124] of the patent.

3.6.3 It follows from the above that it is clear for the skilled person from the teaching of the specification that it would be necessary to adapt the manufacturing conditions of the examples in the patent and also how these conditions should be adapted in order to arrive at films wherein the numbers H1 and H2 of coarse projections fall within the claimed ranges.

3.7 For these reasons the experimental report D7 is not sufficient to prove that the subject-matter of claim 1 of the main request cannot be reworked because of its broadness.

3.8 The board is therefore satisfied that it is possible for the skilled person to carry out the invention in the whole area claimed without undue burden and

consequently the requirements of sufficiency of disclosure are met.

4. *Inventive step*

4.1 As already mentioned the patent provides polyester films for use in magnetic recording media.

4.2 It was agreed between the parties that D1 represents the closest prior art document. D1 discloses a polyester film comprising a polyester at least mainly composed of ethylene terephthalate and a polyetherimide (see claim 1) for use in, for instance, a magnetic recording medium (see claim 23). According to paragraph [0027] it is preferable that the number of coarse protrusions with a protrusion height of 0.5 µm or more is less than 30/100 cm^2, preferably less than 10/100 cm^2, and more preferably less than 5/100 cm^2. It was also agreed between the parties that the coarse protrusions defined in paragraph [0027] of D1 correspond to the number H2 of coarse projections of claim 1 of the patent in suit.

4.3 According to the respondent the technical problem of the patent in suit in the light of the disclosure of D1 can be seen in the provision of a polyester film having improved electromagnetic conversion characteristics and deposition stability.

4.4 As a solution to this problem, the patent proposes the films of claim 1 characterized in that the number H1 of coarse projections having a height of 0.28 µm or more per 100 cm^2 is ≤ 100 (see 3.1 above, feature c)).

4.5 The question whether this problem has been credibly solved by the claimed films and therefore constitutes the objective technical problem was hotly disputed during the proceedings.

4.5.1 The patent specification includes 19 examples and 15 comparative examples which, in the respondent's view, show that an improvement in the electromagnetic conversion characteristics is achieved when using the claimed films.

4.5.2 On the other hand the appellant disputes this assertion. In its opinion the examples do not demonstrate the criticality of the parameters H1 and H2. The examples do not show a nexus between the values H1 and H2 and the alleged effect achieved. The comparisons are flawed because not only were the values H1 and H2 modified but also the compositions of the films are different. Additionally, the examples in the patent are not sufficient to make it credible that the claimed effect can be observed across the whole scope of the claim. The appellant relies on decision T 0939/92 (OJ EPO 1996, 309) in support of its arguments.

4.5.3 According to the established jurisprudence (see Case Law of the Boards of Appeal of the EPO, 6th edition 2010, Chapter I.D.9.9), if comparative tests are chosen to demonstrate an improved effect, the nature of the comparison with the closest prior art must be such that the alleged advantage is convincingly shown to have its origin in the distinguishing feature of the invention compared with the closest prior art.

4.5.4 In the present case the distinguishing feature is the number H1 of coarse projections, a feature not disclosed in D1. The comparative tests in the patent specification show that the advantageous effect is attributable to this distinguishing feature. Thus, the comparison of the film of comparative example 15 (a polyester/polyetherimide film having a number H2 of coarse projections as preferred in D1 but having a number H1 of coarse projections of 110 and therefore outside the range of claim 1) with the films of examples 15, 16, 17 or 19 (relating to similar films but having a number H1 of coarse projections of respectively 25, 60, 58 and 22 and thus within the claimed range) shows that the electromagnetic conversion characteristic and the deposition stability of the films according to claim 1 are superior (see Table 6). In fact, the film of comparative example 15 cannot be used for a deposited high-density magnetic recording tape.

Similar results can be seen when comparing the film of comparative example 7, which has a number H1 of coarse projections of 110, with the films of examples 8 to 11, which have values from 15 to 45 (see tables 2 and 3). The film of comparative example 7 has bad electromagnetic conversion characteristics and therefore an insufficient level to be used for a high-density magnetic recording tape.

These examples convincingly show that it is not sufficient to have a film which shows only a number H2 of coarse projections inside the claimed range (as in document D1), but that the film must also have number

H1 of coarse projections within the claimed range to obtain superior film properties.

4.5.5 Concerning the criticism of the appellant that in comparative examples 7 and 15 not only the number H1 of coarse projections has been varied but also other properties have been varied, the board agrees with the respondent that the numbers H1 and H2 of coarse projections are the result of either the composition of the polymer alloy comprised in the polyester or of the conditions of the film preparation or of both. Thus, for varying the number H1 of coarse projections it is necessary either to vary the composition of the polymer or the manufacturing conditions or both. The fact remains that the films of comparative example 7 and comparative example 15 fulfil all the other features of claim 1, the only difference with respect to the claimed features being the number H1 of coarse projections.

The board is thus satisfied that the improvement of the films is linked to the distinguishing feature over D1, namely the number H1 of coarse projections.

4.5.6 The appellant also argued that it was not credible that an improvement could be achieved across the whole scope of the claim.

The board disagrees. The improvement of the magnetic recording properties of the claimed films is mainly due to the structure of the film, that is to say, to the reduced amount of coarse projections, because these projections are in direct contact with the heads at a high head-to-tape speed. The nature of the

thermoplastic resin other than a polyester resin is less relevant for the achievement of this improvement. Consequently, in the absence of meaningful experimental evidence to the contrary (and as explained in the context of sufficiency of disclosure D7 does not qualify for this purpose), the objection of the appellant cannot be accepted.

4.5.7 Finally this finding is not in contradiction with the decision T 0939/92 cited by the appellant in support of its argument that the data in the patent are not sufficient to make credible that there is a technical effect across the scope of the claim. The situation in the present case is quite different from the situation in that decision for several reasons:

- From a legal point of view decision T 0939/92 relates to an *ex parte* case whereas the present case is *inter partes*. In *ex parte* proceedings the applicant bears the burden of proof of the facts he relies on. By contrast, as a fundamental principle of *inter partes* proceedings, each of the parties to the proceedings carries the burden of proof of the facts it alleges. Therefore, the burden of proof lies upon the opponent/appellant to support its contention that the technical effect is not observed over the whole claimed area. As mentioned above, D7 is not enough to discharge the appellant's burden of proof.

- Moreover in that decision the board came to the conclusion that it was inherently unlikely that all compounds had the desired activity, *inter alia* on the basis of the applicant's own submission

that, in view of the available prior art, a person skilled in the art would have been unable to predict that the claimed compounds would have the required activity (see point 2.6.2 of the reasons). On the contrary, in the present case the prior art cited by the appellant includes documents with the same broad definition for the thermoplastic resin of a film for magnetic recording media (see D5, claim 1 and paragraphs [0020]-[0023]), thus supporting also the argument of the respondent that the composition of the resin is less important than the structure of the film.

In view of these differences, the rationale of T 0939/92 is not applicable to the present case.

4.6 For these reasons the board is satisfied that the problem as defined above under point 4.3 has been credibly solved by the films of claim 1.

4.7 Obviousness

4.7.1 It remains to be decided whether, in view of the available prior art documents, it would have been obvious for the skilled person to solve this problem by the means claimed.

4.7.2 There is no hint to this solution in document D1 itself because the number H1 of coarse projections is not mentioned at all.

The appellant argued that the subject-matter of claim 1 would be *prima facie* obvious in view of D1 because it teaches on page 4, lines 42 to 48 that the presence of

coarse particles is undesirable and that the total number of such projections should be minimised.

The board does not agree with this interpretation of the teaching of D1. In the paragraph cited by the appellant it is stated that "it is preferable that the number of coarse protrusions **with a protrusion height of 0.5 µm or more** on the surface is less than 30/100 cm^2" and that "it is more preferable having regard to film formability and clarity that the number of coarse protrusions **with a protrusion height of 0.5 µm or more** on the surface is less than 10/100 cm^2, and a still more preferable number is less than 5/100 cm^2" (emphasis by the board). The projections with a lower height are not mentioned in D1, the teaching of this document being merely to reduce the number of coarse projections having a height of 0.5 µm or more. The skilled person is not taught by D1 to reduce all coarse projections but only those mentioned above. Consequently D1 alone gives no hint to the claimed subject-matter.

4.7.3 There is also no hint in D6 which relates to biaxially oriented laminated polyester films consisting of at least two layers. The films of D6 are said to be useful for high-density magnetic recording medium when they have the surface properties specified in claim 1. These surface properties include a 3-D surface roughness lower than 10 nm and the number of coarse projections having a height H3 (0.84 µm as explained by the respondent during the oral proceedings) or more of not more than 5/100 cm^2. According to paragraph [0013] of D6, when the number of coarse projections H3 is larger than 5 per 100 cm^2 and the film is used as a magnetic recording medium, the number of drop-outs become

disadvantageous. Concerning the number of coarse projections H2 and H1 it is stated in paragraph [0014] that the number of H2 projections is preferably 10 or less and the number of H1 projection is preferably 80 or less.

There is, however, no information in D6 of any technical effect associated with these values of H2 and H1. In most of the comparative examples in D6 (see comparative examples 1, 3-6 and 8) the H2 and H1 values are within the preferred values disclosed in paragraph [0014], but the magnetic characteristics of the films are nevertheless unsatisfactory (see Table 2).

Thus, the person skilled in the art confronted with the task of finding a solution to the technical problem underlying the patent is not directed by the teaching of D6 to choose the number of H1 projections within the range defined in claim 1. The skilled person would therefore not combine the teaching of D1 and D6 to solve the problem. The mere assumption that the person skilled would do so without providing any incentive thereto appears to be based on hindsight. This view is compounded by the fact that D6 is not concerned with films made from a polymer blend.

4.8 It follows from the above that the subject-matter of claim 1, and by the same token the subject-matter of claims 2 to 29 which are directly or indirectly dependent of claim 1, involves an inventive step within the meaning of Article 56 EPC.

4.9 The subject-matter of claim 30 is directed to a process for manufacturing a polyester film, the process being

limited to the use of a polyester resin and a polyimide resin as film materials and including the preferred filtering and stretching conditions (see paragraph [0115] to [0124]) which ensure that the preferred films covered by claim 1 are obtained.

Thus the process of claim 30, even if not explicitly specified, is directed to the preparation of the preferred inventive films of claim 1 discussed above.

Taking into account that it is well-established that analogy processes are patentable insofar as they provide a novel and inventive product (see Case Law of the Boards of Appeal of the EPO 6th edition 2010 Chapter I.D.8.18) the subject-matter of claim 30 would involve an inventive step even if the process would be seen as an analogy process. Under these circumstances, there is no need for the board to examine whether the process of claim 30 would have been obvious to the skilled person from the disclosure of documents D1 or D5 as maintained by the appellant. Even if that would be the case, the process would be patentable as it results in novel and inventive films.

AUXILIARY REQUESTS

5. As the main request of the respondent is allowable, there is no need for the board to deal with the auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar The Chairman

M. Cañueto Carbajo W. Sieber