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**D E C I S I O N**  
of 14 December 1998

**Case Number:** T 0856/97 - 3.5.2

**Application Number:** 88114707.8

**Publication Number:** 0306960

**IPC:** G11B 5/704

**Language of the proceedings:** EN

**Title of invention:**  
Magnetic card

**Patentee:**  
Diafoil Hoechst Co., Ltd.

**Opponent:**  
Imperial Chemical Industries PLC

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 54(2), 54(3), 56, 100(a), 100(c)

**Keyword:**  
"Novelty (yes) - reading a citation in the light of documents  
not disclosing general knowledge (not admissible)"  
"Inventive step (yes) - non-obvious combination of features"

**Decisions cited:**  
T 0233/90, T 0288/90

**Catchword:**  
-



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Chambres de recours

Case Number: T 0856/97 - 3.5.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.2  
of 14 December 1998

**Appellant:**  
(Opponent) Imperial Chemical Industries PLC  
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**Representative:** Humphries, Martyn  
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**Respondent:**  
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**Representative:** Ter Meer Steinmeister & Partner GbR  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 25 June 1997  
rejecting the opposition filed against European  
patent No. 0 306 960 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** W. J. L. Wheeler  
**Members:** M. R. J. Villemin  
A. C. G. Lindqvist

## Summary of Facts and Submissions

I. The Appellant filed an opposition against European patent No. 0 306 960 and now contests the decision of the Opposition Division rejecting the opposition. The opposition was based on the grounds that the subject-matter of the European patent in suit was not new and did not involve an inventive step (Article 100(a) EPC in conjunction with Articles 52(1), 54 and 56 EPC) and that the subject-matter of the patent opposed extended beyond the content of the application as filed (Article 100(c) EPC).

II. The patent in suit has not been amended during appeal proceedings. Claim 1 reads as follows:

"A magnetic card comprising a monoaxially or biaxially stretched polyester film which has an apparent density of 0.4 to 1.3 g/cm<sup>3</sup>, an opacifying power of 0.2 or more and comprising minute cells of a diameter of 1 to 300 µm, and a magnetic layer having a thickness of 1 to 10 µm applied to on at least one surface of said film."

Claim 2 depends on claim 1.

III. The following documents were cited by the parties and have been taken into consideration by the Board:

D1: EP-A-0 300 060, constituting prior art according to Article 54(3) EPC,

D2: Book "Magnetic Recording"; Volume I, Technology; Editors C. Denis Mee et al. McGraw-Hill Book Company (1987), pages 228, 229 and 233,

- D3: Book "Encyclopedia of Chemical Technology"; Kirk-Othmer; third edition, volume 14; John Wiley & Sons, (1981), pages 732 and 733,
- D4: Technical Paper "High Yield PET films"; ICI Americas Inc.; pages 1 to 14; John R. Newton; conference given at the 1984 TAPPI POLYMERS, LAMINATIONS AND COATINGS CONFERENCE; 24 to 27 September 1984; Westin Copley Place Hotel, Boston, MA.,
- D5: TECHNICAL DATA SHEET MX TD 327 "MELINEX" POLYESTER FILM; ICI Petrochemicals and Plastics Division; Melinex X470, Melinex X475; Imperial Chemical Industries PLC, 1985 W.R. (1985),
- D6: GB-A-1 415 686,
- D7: EP-A-0 044 616,
- D8: English translation of JP-A-51 34963,
- D9: English translation of JP-A-52 27666,
- D10: GB-A-1 453 124,
- D11: English abstract of JP-A-61 117731,
- D12: English abstract of JP-A-62 204941,
- D13: abstract of GB-A-1 453 124 (above-mentioned as D10)
- D14: English abstract of JP-A-59 127228,
- D15: English abstract of JP-A-56 022223,

D16: English abstract of JP-A-59 121626,

D17: English abstract of JP-B-82 046456,

D18: English abstract of JP-B-83 050625,

D19: English abstract of several corresponding patents,  
among others JP-A-50 038765 and GB-A-1 479719,

D20: English abstract of JP-A-52 043871,

D21: GB-A-4 351 991.

Documents D1 to D7 were cited by the Opponent (now Appellant) in the notice of opposition. Documents D8 and D9 were submitted by the Patent proprietor (now Respondent) with the letter dated 6 May 1997. Documents D10 to D16 were cited by the Opponent in the letters of 7 May and 12 May 1997. Documents D17 to D21 were cited by the Appellant with the statement of grounds of appeal dated 9 September 1997.

IV. The Appellant argued essentially as follows:

There was no basis in the application as originally filed for cells having a diameter of 1 to 300  $\mu\text{m}$  as specified in claim 1 as granted, except for the specific method using crystalline polypropylene. None of the documents D17 to D21 provided support for the Respondent's submission that cells having the specified size could be prepared by a number of known processes. Therefore, the subject-matter of claim 1 of the patent in suit extended beyond the content of the application as originally filed.

Documents D2 and D3 concerned magnetic tapes, but they were also relevant to the field of magnetic cards because there was no reason to suppose that a different magnetic layer thickness was appropriate for tapes and cards. Documents D2, D3, D10 and D11 disclosed magnetic layers with thicknesses within the range 1 to 10  $\mu\text{m}$  specified in claim 1 of the patent in suit. The use of polyester film described in D1 for producing magnetic cards was inherently disclosed in D1 and these cards would have the conventional thickness disclosed in D2, D3, D10 and D11. Consequently, the subject-matter of claim 1 of the patent in suit was not novel over D1.

The only feature distinguishing the claimed magnetic card from the magnetic cards of D4 was the thickness of the magnetic layer. However, as argued above, the disclosure of a magnetic layer in a magnetic card implicitly and automatically disclosed a conventional layer which had a thickness within the range 1 to 10  $\mu\text{m}$ . Hence, all the features of claim 1 were disclosed in D4. For analogous reasons, the subject-matter of claim 1 was not novel over the prior art disclosed in D6 or D7.

If the view was taken that the claimed magnetic card was novel over D6, this card was obvious over a combination of D4, D6 and the general knowledge of a person skilled in the art.

- V. The Respondent argued that, as mentioned on page 3, line 39 to page 4, line 28 of the patent in suit, the method of manufacturing film by incorporating crystalline polypropylene homopolymer was only a preferable method of easily obtaining polyester films containing minute cells of a diameter of 1 to 300  $\mu\text{m}$ . As stated on page 3, lines 25 and 26 of the patent in suit, the method of producing the minute cellular polyester film was not limited particularly.

It was correct that D1 referred to magnetic cards. However, the process indicated on pages 3 and 4 of D1 was under the heading "Background Art" and was not the invention actually disclosed in D1. The disclosure of the actual invention started on page 7, second paragraph, and, in the following description, there was no reference to a magnetic card. The mention in the description of the patent in suit (page 4, line 55 to page 5, line 5) that the magnetic layer employed in the invention was "not a special one" obviously referred to the nature and the methods of forming the magnetic layer and not to its thickness.

The reference to documents D2, D3, D10 to D12 and D14 to D16 did not warrant the conclusion that the thickness of the magnetic layer of the magnetic card disclosed in D1 would necessarily have a value within the range 1 to 10  $\mu\text{m}$  specified in claim 1.

D4 neither disclosed the cell diameter values specified in claim 1 nor the opacifying power values specified in claim 1. D6 did not refer to magnetic cards and did not disclose a magnetic layer thickness of 1 to 10  $\mu\text{m}$ . D7 disclosed the use of polyester films in identity cards but not the cell diameter and opacifying power values in a magnetic card. There was no reason for assuming that identity cards necessarily or routinely had a magnetic strip or layer.

In conclusion, the subject-matter of claim 1 of the patent in suit was novel over any one of documents D1, D4, D6 and D7.

The claimed invention was not obvious over a combination of D6 and D4 since, in particular, D6 did not disclose any of the values of opacifying power, cell diameter and magnetic layer thickness specified in claim 1.

VI. The Appellant requested that the decision under appeal be set aside and that European patent No. 0 306 960 be revoked.

VII. The Respondent requested that the appeal be dismissed.

### Reasons for the Decision

1. The appeal is admissible.
2. *Ground of opposition under Article 100(c) EPC*

The Appellant submitted that there was no basis in the application as originally filed for cells having a size as specified in claim 1, except for the specific case where crystalline polypropylene was used, and, therefore, the subject-matter of claim 1 of the patent in suit extended beyond the content of the application as filed.

The parts of claim 1 which are relevant to the Appellant's above-mentioned submission may be put together as follows: "A magnetic card comprising a monoaxially or biaxially stretched polyester film comprising minute cells of a diameter of 1 to 300  $\mu\text{m}$ ". The Board observes that page 7, second paragraph of the description of the application as originally filed mentions "Therefore, it is preferable to employ a method disclosed by the present inventors in Japanese Patent Application No. 313896/1986 as a method of easily obtaining the polyester film containing minute cells used in the present invention". Thus, it is not **essential** to employ this method and the originally filed claim 1 is not limited to any specific method.



The description of the application as originally filed further mentions (see page 7, last paragraph to page 8, first paragraph) that "the sheet is monoaxially or biaxially stretched...thereby obtaining a polyester film containing numerous minute closed cells...". In addition to this, the description of the application as originally filed (see page 10, line 20 to page 11, line 2) and the published European Patent No. 0 306 960 (see page 4, lines 22 to 26) clearly specify that a polyester film having "minute cells of a diameter of 1 to 300  $\mu\text{m}$ , preferably 5 to 100  $\mu\text{m}$ , is obtained" (emphasis added by the Board; the words "is obtained" are missing from the description of the application as originally filed but this error has been corrected in an obvious manner in the published European Patent).

It follows that the wording "A magnetic card comprising a monoaxially or biaxially stretched polyester film comprising minute cells of a diameter of 1 to 300  $\mu\text{m}$ " in claim 1 of the patent in suit is exactly and explicitly supported by the description of the application as originally filed. Documents D17 to D21 which are cited by the Appellant in the grounds of appeal (see section 8) do not subtract from the disclosure in the original application.

Thus the ground of opposition under Article 100(c) EPC does not prejudice the maintenance of the patent.

### 3. *Novelty*

#### 3.1 Novelty with regard to prior art according to Article 54(3) EPC

Document D1 belongs to the state of the art according to Article 54(3) EPC for all the contracting states designated in the patent in suit. D1 discloses a polyester film as used in the magnetic card according to claim 1 of the patent in suit.

The Board agrees with the Respondent and the Opposition Division that this document does not explicitly or implicitly teach a skilled person to make magnetic cards with the polyester film it discloses. More generally, nowhere in the description of D1 is there disclosed that magnetic material is or could be deposited as a layer on the polyester film for producing items able to store information in magnetic form, let alone the thickness of such a magnetic layer.

Referring to the prior art illustrated by various documents (D2, D3, D10 to D12, D14 to D16) the Appellant alleged that the magnetic cards which are disclosed in D1 have a magnetic layer which is conventional and a skilled person would expect the thickness of such a conventional layer to lie within the range 1 to 10  $\mu\text{m}$  specified in claim 1. For the following reasons, the Board cannot share the Appellant's views:

- as indicated above, D1 does not implicitly or explicitly mention the use of the polyester film claimed in this document for producing magnetic cards or any other magnetic items,
- since D1 represents prior art according to Article 54(3) EPC it may only be taken into consideration for assessing novelty. In certain situations, handbooks, encyclopaedias or dictionaries may be used as an aid to the correct interpretation of terms of the art used in a document belonging to the prior art according to

Article 54(3) EPC, see for example unpublished decision T 233/90, first paragraph of section 3.3, and unpublished decision T 288/90, see sections 4.3 to 4.5, where it has been admitted that novelty could be examined on the basis of a first document in the light of the teaching of a second document fairly representative of the general technical knowledge and regarded as an aid for the correct interpretation of any particular term mentioned in the first document. However, in the present case, there is nothing in D1 which demands interpretation or clarification relating to the thickness of a magnetic layer. In any case, the combined disclosures of documents D2, D3, D10 to D12 or D14 to D16 do not demonstrate that it was unquestionably acknowledged general technical knowledge that the thickness of the magnetic layer of a magnetic card must lie within the range 1 to 10  $\mu\text{m}$ . This point is taken up again in the section below relating to inventive step (see in particular section 4.5).

It is concluded that the subject-matter of claim 1 is novel over D1.

3.2 Novelty with regard to prior art according to Article 54(2) EPC

The Appellant also contests novelty on the basis of D4, D6 or D7.

- Although D4 refers to the use of micro-voided polyester films as a material for manufacturing magnetic cards, it discloses neither an opacifying power of 0.2 or more nor a magnetic layer

thickness of 1 to 10  $\mu\text{m}$ . Without using hindsight, it cannot be assumed that the disclosure of a magnetic layer automatically implies a layer within the limits specified in claim 1.

- D6 discloses a process for the production of a polyester film comprising globules having a diameter of 5 to 10  $\mu\text{m}$  and voids having three or four times the diameter of the globules. D6 makes no reference to magnetic cards or magnetic layers. Without using hindsight, it cannot be assumed that magnetic cards are *inherently* disclosed in D6 or that the disclosure of magnetic cards *inherently* discloses magnetic layers of the thickness specified in claim 1.

- D7 deals with the preparation of voided opaque films made from a mixture of polyesters and polyolefins and discloses the use of such films e.g. in magnetic recording tapes and in identity cards. This document does not indicate or suggest the use for *magnetic cards*, nor the size of the cells. There is no disclosure of a magnetic card having a magnetic layer of thickness 1 to 10  $\mu\text{m}$ .

3.3 The Board concludes that the subject-matter of claim 1 is novel over the disclosure of D4, D6 or D7.

4. *Inventive step with regard to D4 and D6*

4.1 The remaining issue to be considered is the Appellant's contention that the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC with regard to a combination of D4 and D6.

- 4.2 The technical problem underlying the present invention is to provide a magnetic card comprising a polyester film and having improved flexibility, flatness and punching properties while maintaining various excellent characteristics of the polyester film and having the necessary magnetic properties.
- 4.3 If one refers to claim 1 of the patent in suit, the problem addressed in the patent in suit is solved by combining particular values of physical parameters of the polyester film and of the magnetic layer constituting the magnetic card.
- 4.4 D4 discloses an opaque micro-voided polyester film having a density value of 1.0 or 0.8 g/cm<sup>3</sup> or less (page 1, left-hand column, lines 17 to 21). D4 discloses neither an opacifying power of 0.2 or more, nor the diameter of the cells, nor a magnetic layer thickness of 1 to 10 µm. D6 discloses polyester films whose values of density, opacifying power and cell diameter are within the ranges specified in claim 1 but not indicated as being suitable for magnetic cards. D6 mentions the use of this film for replacing photographic paper or for producing magnetic recording tapes or identity documents (page 4, lines 21 and 22). The Appellant argued that identity documents include cards with a magnetic stripe but did not submit convincing arguments as to why identity documents should be necessarily provided with magnetic stripes or a magnetic layer.
- 4.5 In the notice setting out the statement of grounds of appeal, the Appellant admits that the thickness of the magnetic layer is not specifically disclosed in D4 or in D6, but submits that this feature is implicitly disclosed, as previously argued in the discussion concerning novelty. For the following reasons, these submissions are not convincing:

D2, D3 and D10 essentially concern magnetic tapes. D2 indicates (page 229) typical values 10  $\mu\text{m}$  for reel-to-reel and 5  $\mu\text{m}$  for compact cassette tape and D3 mentions (see Figure 1) a 5.1 to 15.2  $\mu\text{m}$  thick magnetic coating. However, for a magnetic rigid disc, which is more comparable to a magnetic card than a magnetic tape is, D2 indicates a typical magnetic layer thickness of 0.7  $\mu\text{m}$  (see section 3.4.1.4).

The Appellant contended (point 13 of the statement of grounds of appeal) that D2 and D3, in particular, were relevant since "there is no reason to suppose that a different magnetic layer thickness is appropriate for tapes and cards". However, the Board observes that magnetic tapes experience quite different operation conditions than those imposed on magnetic cards, so that it cannot be inferred that a magnetic layer thickness appropriate for a magnetic tape would be practicable for a magnetic card. If he was seeking a solution to the problem addressed in the patent in suit, the skilled person would not try to combine D4 and D6 because D6 does not suggest that there would be a promising field in using the polyester films disclosed in this document for magnetic cards. There is no reason to suppose that the choice of a 5 to 10  $\mu\text{m}$  cell diameter indicated in D6 would be suitable for a magnetic card when combined with an apparent density of 0.8 to 1.4 (as indicated in D4) or 0.7 to 1.2 (as indicated in D6). In addition to choosing appropriate cell diameter and density values, the skilled person would have to choose values of opacifying power and magnetic layer thickness as specified in claim 1. The prior art gives no guidance which could make it obvious to the skilled person to make all these choices, in combination.

Therefore, the subject-matter of claim 1 involves an inventive step over the combined teachings of D4 and

D6. The Board notes in passing that a combination of the apparent density 0.8 to 1.4 disclosed in D4 with the values ranging from 1 to 20  $\mu\text{m}$  of the magnetic layer thicknesses disclosed in documents D11 to D16 would result in a magnetic card still lacking the opacifying power and cell diameter values specified in claim 1. The Board also notes that D5 does not mention that the commercially available polyester films are suitable for use in magnetic cards.

4.5 Summarising, there is no suggestion in the prior art that the problem addressed in the patent in suit would be solved by the claimed combination of values of apparent density, opacifying power, cell diameter and magnetic layer thickness. The subject-matter of claim 1 involves an inventive step with regard to the prior cited by the Appellant. Consequently, the grounds for opposition do not prejudice the maintenance of the European patent as granted and the appeal has to be dismissed.

### Order

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:



M. Kiehl

The Chairman:



W. J. L. Wheeler