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Datasheet for the decision of 11 September 2007

Case Number: T 0291/05 - 3.4.02

Application Number: 98401570.1

Publication Number: 0890860

IPC: G02B 6/44

Language of the proceedings: EN

Title of invention:
Optical fiber cable components made from polyolefin materials

Applicant:
Draka Comteq B.V.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 111(1)

Keyword:
"Case changed following amendment - remittal (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0291/05 - 3.4.02

D E C I S I O N
of the Technical Board of Appeal 3.4.02
of 11 September 2007

Appellant: Draka Comteq B.V.
De Boelelaan 7
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Representative: Blokland, Arie
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 15 September 2004 refusing European application No. 98401570.1 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: A. Klein
Members: M. Rayner
M. J. Vogel

Summary of Facts and Submissions

I. The present appeal was filed on 20 October 2004, the appeal fee being paid on the same date, the statement of grounds being filed on 18 January 2005 and is against the decision of the examining division dated 15 September 2004 refusing European patent application number 98 401 570.1, relating to optical cables. In the examination and/or appeal proceedings, reference has been made to the following documents:

D1 US-A-5 031 996
D2 EP-A-Patent Abstracts Japan, vol.6, no.84 (P-117), Abstract of JP-A-57 020 701
D3 EP-A-Patent Abstracts Japan, vol.12, no.354 (P-761), Abstract of JP-A-63 106 613
D5 US-A-5 574 816

II. According to the decision under appeal, the examining division was of the opinion that the subject matter of the independent claims presented to it could not be considered to involve an inventive step within the meaning of Article 56 EPC having regard to document D1, D2 or D3, in the light of the disclosure of document D5.

With respect to document D1, the division considered that the component according to claim 1 of the claim presented was distinguished by a weight percentage of 0.05 to 1 of a nucleating agent dispersed in polyolefin material, giving a technical effect understood to be increasing crystallinity and thus physical properties of the material. Improving physical properties is obvious to the skilled person and document D5 teaches that polypropylene-polyethylene optical components are

improved by a nucleating agent. The skilled person would assume the teaching would apply to the polyolefins disclosed in document D1 and would therefore arrive in an obvious way at a component according to that claimed in claim 1.

The division noted that the applicant's arguments were based on the assumption that document D5 represents the closest prior art, but that no argument had been provided as to why a choice of document D1 as closest prior art is not valid. The specific argument raised by the applicant can be seen to be of relevance whichever of the documents is taken to be the starting point for the combination thereof.

Contrary to the applicant's view, the component taught by document D1 is not formed on the optical fibre, but corresponds to the buffer tube taught in document D5. Moreover, both document D2 and document D3 describe outer protective layers and the teaching of document D5 can be considered applicable to the components of these documents. Since each of documents D2 or D3 disclose optical components from which the subject matter of claim 1 differs in the same way as from document D1, a lack of inventive step of the claimed subject matter also therefore exists when either of these documents replaces document D1 in the line of argument advanced for the combination of documents D1 and D5.

III. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of a main request (=claims 1-18 filed as auxiliary request 6 on 10 August 2007) or, in the alternative, of auxiliary request 1 (=claims 1-17, filed as auxiliary

request 7 on 10 August 2007). Oral proceedings were requested on an auxiliary basis with the statement of grounds for appeal.

The appellant argues that document D5 is indeed the closest prior art as it relates to a single buffer layer tube, whereas document D1 concerns a two layer sheath. Document D5 does not disclose any information about melt flow index of polymers. According to document D5 the buffer tube is prepared by conventional means in the presence of a nucleating agent acting as a material for increasing Young's modulus and dimensional stability of the polyolefin material, but does not suggest any relationship between optimal MFI and reduction of shrinkage, process induced orientation and increased crystallinity, the object of the invention. E-mail correspondence filed during the appeal proceedings indicate that the MFI property was not met by document D5.

Document D1 teaches that the reasons for using a polyolefin are to provide a material which (i) is simple to work with and inexpensive and (ii) keeps the disturbing influence of the hydrocarbon oils of filling compound low. The crystallinity of the layer AH1 disclosed in document D1 is not discussed as it is not intended to be the primary crush resistance protector. There is therefore no reason why the skilled person should have considered the two documents in combination as a possible source of hints in solving the problem addressed by the invention.

The appellant explained during oral proceedings appointed following its auxiliary request that it is

not known what is contained in the Japanese texts, but abstract documents D2 and D3 do not show a single buffer tube according to the preamble of the claim. There is therefore no reason for the skilled person, starting from document D5, to use the MFI mentioned in these documents for the single buffer tube of document D5.

The invention is therefore both novel and inventive.

IV. In a communication accompanying the summons to oral proceedings, the board expressed its doubts about the chances of success for the appeal. In particular, nothing apart from the nucleating agent was argued to be novel over document D1 and the approach of the appellant had ignored the reasoning combining the teachings of the prior art as advanced by the examining division. One month ahead of the oral proceedings, the appellant filed sets of claims directed to a single buffer layer, which sets of claims now are the basis of its main and auxiliary requests.

V. Claim 1 according to the main request of the appellant is worded as follows.

"Single layer buffer tube made from a polyolefin material, wherein the polyolefin material contains a nucleating agent, characterized in that said polyolefin material has a high Melt Flow Index (MFI) above 3."

Recitation of the wording of claim according to the auxiliary request is not necessary for the reason given in section 2.6 of the Reasons for the Decision given below.

VI. During the oral proceedings, the appellant filed the copies of the e-mail correspondence referred to in section III above. At the end of the oral proceedings the board gave its decision.

Reasons for the Decision

1. The appeal is admissible.

2. The decision of the examining division was premised on taking document D1 to be the closest prior art. Before the oral proceedings in the appeal stage, claim 1 was amended, with reference to page 16, line 12 of the documents as filed, so as to be directed to a "single layer buffer tube". One could also refer to page 15, line 22 in this context.

2.1 Document D1 does not disclose a single layer buffer tube but a two layer sheath, the outer and inner layers being denoted respectively by AHA and AHI in the figures. Inner layer AHI is taught to be manufactured of a polyolefin (see column 2, line 47). The outer layer AHA is polyester. Melt flow index (MFI) of 10g/10min is mentioned in the last line of column 2.

2.2 Document D5 does disclose a single layer buffer tube. The buffer tube is denoted by 12 in Figure 1 and is made from a polypropylene-polyethylene copolymer resin or compound blended with a filler (e.g. column 3, lines 1-3). Moreover, nucleating agents can be used (see the paragraph bridging columns 3 and 4).

2.3 As document D5 discloses a single layer buffer tube made from a polyolefin material, wherein the polyolefin material contains a nucleating agent, the board reached the conclusion that the appellant is correct in its position that this document can be considered to represent the closest prior art to the independent claim as amended. The problem addressed by the claimed subject matter is therefore that of improving the properties of the single buffer tube. The case has changed from that before the examining division, where arguments on inventive step advanced by the division took document D1 to represent the closest prior art and followed the line that it is obvious to use nucleating agents to improve the properties of the inner sheath AHI using the teaching of document D5. These arguments are not persuasive when starting from document D5 in relation to the problem to be solved in relation to the single buffer tube.

2.4 Moreover, while the remark of the examining division is verbally true, that the specific arguments advanced by the applicant can be considered of relevance, whichever document is taken as starting point, this remark does not, in view of the amendment to a single buffer tube, amount to an adequate consideration of inventive step by the examining division and starting from document D5.

2.5 Neither document D2 nor document D3 represents a better starting point than document D5 when considering inventive step. In the case of document D2, no details of composition of the optional buffer layer 4 are given. In the case of document D3, no buffer tube is shown.

2.6 Since the case has changed from a situation where the applicant had not adequately addressed inventive step starting from document D1 to a situation where necessary consideration of inventive step using an approach starting from document D5 has not been exhaustively explored by the first instance, in respect of, for example, the claimed high melt flow index above 3 and the e-mail correspondence filed during the oral proceedings before the board, the board reached the view that it is appropriate to remit the case back to the division to avoid any loss of instance. As this situation exists for the main request, no further consideration of the auxiliary request is necessary in the present decision.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance for further prosecution.

The Registrar The Chairman

M. Kiehl A. G. Klein