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**Datasheet for the decision
of 10 May 2017**

Case Number: T 0802/10 - 3.2.05

Application Number: 00953328.2

Publication Number: 1204523

IPC: B29C49/00

Language of the proceedings: EN

Title of invention:

Container and its production process

Patent Proprietor:

Borealis Technology Oy

Opponents:

Ineos Manufacturing Belgium NV
The Dow Chemical Company
Basell Polyolefine GmbH

Headword:

Relevant legal provisions:

EPC 1973 Art. 56
EPC R. 140
RPBA Art. 12(4)

Keyword:

Late-filed document - admitted (yes)
Inventive step - all requests (no)

Decisions cited:

G 0001/10

Catchword:



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Boards of Appeal
Chambres de recours

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Case Number: T 0802/10 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 10 May 2017

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 March 2010 concerning maintenance of the
European Patent No. 1204523 in amended form.**

Composition of the Board:

Chairman M. Poock
Members: P. Lanz
J. Geschwind

Summary of Facts and Submissions

- I. The patent proprietor and all opponents 1, 2 and 3 lodged separate appeals against the interlocutory decision of the opposition division posted on 16 March 2010 that European patent No. 1 204 523, as amended during the opposition proceedings, met the requirements of the EPC.
- II. The oppositions against the patent were based on the grounds according to Article 100(a) EPC 1973 (lack of novelty and lack of inventive step) and Article 100(b) EPC 1973.
- III. By letter dated 13 January 2012, appellant III (opponent 2) withdrew its appeal and its opposition. It thereby ceased to be a party to the present proceedings except in respect of possible issues of apportionment of costs.
- IV. In reply to the summons to attend oral proceedings, the patent proprietor notified the board that it would attend the scheduled oral proceedings. Consequently, the oral proceedings arranged for 10 May 2017 were cancelled.
- V. Appellant I (patent proprietor) requests that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or on the basis of auxiliary request 1, both filed with its statement setting out the grounds of appeal.

Appellants II and IV (opponents 1 and 3) both request that the decision under appeal be set aside and that the patent be revoked.

VI. The following documents were among those referred to by the parties:

D5: Blasformen '99, Ideen schaffen neue Potentiale, VDI Gesellschaft Kunststofftechnik, Düsseldorf, 1999, table of contents and pages 1, 77 to 91 and 108 to 123;

D13: EP 100 843 A;

D51: H. F. Enderle: PE-HD-Werkstoffe mit ungewöhnlicher Eigenschaftskombination, published in: Aufbereiten von Polymeren mit neuartigen Eigenschaften: Tagung Baden-Baden 29./30. November 1995, VDI Gesellschaft Kunststofftechnik, Düsseldorf, 1995, pages 37 to 53;

D60: Collection of experimental data for the relation of density and tensile modulus.

VII. Independent claim 1 is identical in the main request and in auxiliary request 1. It reads as follows:

"A process for the preparation of an at least 2L volume polyethylene container which process comprises blow molding a bimodal HDPE, wherein said bimodal HDPE contains an ethylene homopolymer and an ethylene copolymer, and wherein the bimodal HDPE has the following characteristics:

- a density of 940 to 970 kg/m³;
- a weight average molecular weight of 200000 to 450000 D;
- a number average molecular weight of 6000 to 20000 D;
- a molecular weight distribution of 15 to 55;
- a MFR₂₁ of 2 to 12 g/10min;
- a tensile modulus of at least 900 mPa; and
- a comonomer content of 0.5 to 10 wt%."

VIII. The arguments of appellant I may be summarised as follows:

The opposition division's positive conclusion on the question of novelty and inventive step for the subject-matter of claim 1 of the main request and of auxiliary request 1 was in principle correct. It was, however, observed that the division's argument that bottles for fabric softeners and liquid washing detergents were commonly produced with a volume of greater than two litres was not based on any evidence. Moreover, a skilled person would read the term "bottles" in document D13 as bottles of less than 2 litres. The requirements for polymer compositions for large containers were different from those for small containers like bottles of less than 2 litres, in particular regarding the value for the MFR₂₁ index. It was thus not obvious to use the known bimodal HDPE for preparing large blow-moulded containers of more than 2 litres.

IX. The arguments of appellants II and IV were essentially as follows:

It was obvious that the unit mPa ("millipascal"), which was indicated as the unit for the tensile modulus in the opposed patent, was orders of magnitude below any possible value for HDPE. A correction to MPa ("megapascal"), which was the proper unit for the tensile modulus, had to be made under Rule 140 EPC.

Regarding the question of inventive step for the subject-matter of claim 1 of both requests, it had to be taken into account that the tensile modulus could be deduced in a straightforward manner from the density, which was one of the parameters mentioned in document

D13. Handbook excerpt D51 and the graph of document D60, which was a collection of experimental data gathered from different sources, served, independently of each other, as evidence for the relation of these two parameters. Consequently, the feature of the bimodal HDPE having a tensile modulus of at least 900 MPa was implicitly contained in document D13. The subject-matter of claim 1 of both requests therefore differed from document D13 only in the feature of the volume of the blow-moulded container being at least 2 litres. In view of the fact that the compositions of document D13 were intended for blow moulding, it was obvious to the skilled person to consider using them to make a blow-moulded container of more than 2 litres, which was generally known to the skilled person before the priority date.

Reasons for the Decision

1. Need for holding oral proceedings

Article 116(1) EPC 1973 stipulates that oral proceedings shall take place either at the instance of the European Patent Office if it considers this to be expedient or at the request of any party to the proceedings.

According to jurisprudence of the boards, the statement of appellant I (see point IV) that it will not attend the oral proceedings is tantamount to a withdrawal of its auxiliary request for oral proceedings, see Case Law of the Boards of Appeal of the EPO, 8th edition 2016, chapter III.C.2.3.1.

Appellants II and IV also requested that oral proceedings be appointed, should the board intend not

to decide in favour of their request to revoke the patent.

Since the auxiliary request for oral proceedings of appellant I is considered to be withdrawn and the request of appellants II and IV is granted (see order below), this case can be decided without holding oral proceedings.

2. *Prior art status of document D5*

2.1 Document D5 has a copyright notice from 1999 and contains a reference to a conference in Baden-Baden on 18 and 19 May 1999. During the first-instance proceedings, it was contentious between the parties whether or not the document had been distributed at the conference and thereby made publicly available before the claimed priority date of the opposed patent (19 August 1999). The opposition division decided to take the document into account as an indication of the common general knowledge of the skilled person. This finding was not contested during the appeal proceedings.

2.2 The board observes that, according to established case law (cf. Case Law of the Boards of Appeal of the European Patent Office, 8th edition 2016, chapter I.C. 2.8.5.), documents proving the common general knowledge of the skilled person do not necessarily stand or fall by their publication date, as long as they are suitable for providing an account of the common general knowledge in the art before the date of priority of a contested claim. Since it is not contested that document D5 meets this requirement, it is taken into consideration in the present proceedings as an indication of the skilled person's general knowledge.

3. *Admissibility of document D51*

Document D51, submitted with appellant IV's statement setting out its grounds of appeal, is a textbook representing the knowledge of a person skilled in the field of bimodal HDPE and its material properties. It was filed in reaction to the finding in the contested decision (cf. point 8.2.5 of the Reasons) that the opposition division did not consider the relation of the material density and the tensile modulus sufficiently proven, which the opponents had alleged during the first-instance proceedings. In view of that, the board considers it to be an immediate and appropriate reaction to the impugned decision. Moreover, its admissibility is not contested by appellant I.

For these reasons, document D51 is not held inadmissible under Article 12(4) RPBA.

4. *Interpretation of the feature "a tensile modulus of at least 900 mPa"*

In the patent in suit, including all claim requests on file, mPa ("millipascal") is indicated as the unit of the tensile modulus. However, for a skilled reader it is obvious that this information is erroneous and that the correct unit of the tensile modulus has to be MPa ("megapascal"), which can also be inferred from the reference to the ISO 527-2 standard in the patent specification.

However, the demand of appellant IV that this obvious error be corrected under Rule 140 EPC cannot be followed, since Rule 140 EPC is not available for

correcting the text of a patent (cf. G 1/10, OJ EPO 2013, 194).

5. *Inventive step*

5.1 Claim 1 of the main request and of auxiliary request 1 remained unamended during the appeal proceedings and thus corresponds to the process claim which the opposition division considered novel and inventive in the impugned decision. In particular, the opposition division established that the subject-matter of claim 1 differed from the content of document D13 in the following features (cf. impugned decision, point 8.2.8 of the Reasons):

(i) the container to be prepared has a volume of at least 2 litres;

(ii) the bimodal HDPE has a tensile modulus of at least 900 MPa.

5.2 While it is not disputed that document D13 does not disclose feature (i), appellants II and IV submit that the tensile modulus could be deduced in a straightforward manner from the density indicated in document D13 and that feature (ii) would therefore be implicitly contained in that document.

5.3 Document D51 is a textbook representing the knowledge of a person skilled in the field of bimodal HDPE and its material properties. In particular, in the paragraph bridging pages 41 and 42 it is explained that:

"Die Steifigkeit (zum Beispiel der Elastizitäts-Modul) ist von dieser teilkristallinen Phasenmorphologie

bestimmt. Der E-Modul ist hauptsächlich eine Funktion des Volumenanteils der kristallinen Hartphase und hängt somit direkt von der Polymerdichte ab. Im Dichtebereich der PE-HD-Werkstoffe von 0,940 bis 0,965 g/cm³ ist der Zusammenhang linear (Bild 2)."

On the basis of this explanation and the clearly stated direct relation of density and tensile modulus, one can conclude from Figure 2 of document D51 that the preferred bimodal HDPE material of Table 1 in document D13 having a density of 0.950 to 0.960 g/cm³ will necessarily have a tensile modulus of at least 900 MPa.

This conclusion and the teaching of document D51 is confirmed by the experimental data compiled in document D60 if densities between 0.940 and 0.965 g/cm³ are taken into account.

- 5.4 For the above reasons, feature (ii) is implicitly but unambiguously contained in document D13. Hence, the subject-matter of claim 1 of both requests differs from the content of document D13 in feature (i) only, i.e. that the container to be prepared has a volume of at least 2 litres.
- 5.5 In that light, the objective technical problem to be solved by the claimed invention was to provide a container of medium size.
- 5.6 However, based on document D5, which represents the skilled practitioner's common general knowledge before the priority date, blow-moulded bottles of 2 to 5 litres and containers with a volume of up to 50 litres were already state of the art in the 1970s (cf. D5, paragraph bridging pages 109 and 110), which is in line

with the statement in paragraph [0002] of the patent in suit.

Even on the assumption that the term "bottles" in document D13 is to be understood as bottles of less than 2 litres, it is a straightforward possibility to use the known bimodal HDPE composition of document D13 for blow-moulding not only bottles of up to 2 litres but also larger bottles and containers having a conventional size of 2 litres or more. This applies all the more in view of the fact that the chosen limit value of 2 litres is not linked to a proven technical prejudice or a particular, let alone unexpected, technical effect.

5.7 Consequently, the subject-matter of claim 1 of both requests on file is not based on an inventive step, Article 56 EPC 1973.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.
3. The appeal of appellant I is dismissed.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated