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**Datasheet for the decision  
of 31 March 2022**

**Case Number:** T 1784/16 - 3.2.05

**Application Number:** 09783677.9

**Publication Number:** 2337665

**IPC:** B29C49/00

**Language of the proceedings:** EN

**Title of invention:**

Injection stretch blow-molding process for the preparation of polyethylene containers

**Patent Proprietor:**

Basell Polyolefine GmbH

**Opponent:**

TotalEnergies One Tech Belgium

**Relevant legal provisions:**

EPC Art. 54, 54(3), 56

**Keyword:**

Novelty - prior European application - main request (no) -  
auxiliary request (yes)  
Inventive step - ex post facto analysis - auxiliary request  
(yes)

**Decisions cited:**

G 0002/98



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Case Number: T 1784/16 - 3.2.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.05**  
**of 31 March 2022**

**Appellant I:** Basell Polyolefine GmbH  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
16 June 2016 concerning maintenance of the  
European Patent No. 2337665 in amended form.**

**Composition of the Board:**

**Chairman** P. Lanz  
**Members:** M. Holz  
T. Karamanli

## **Summary of Facts and Submissions**

I. The patent proprietor and the opponent lodged an appeal against the interlocutory decision of the opposition division finding that, account being taken of the amendments made by the patent proprietor during the opposition proceedings according to auxiliary request 1, European patent No. 2 337 665 (the "patent") and the invention to which it related met the requirements of the EPC.

II. Oral proceedings before the board were held on 31 March 2022.

III. Appellant I (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, as an auxiliary measure, that the appeal filed by appellant II be dismissed, i.e. that the patent be maintained as amended according to auxiliary request 1 forming the basis of the decision under appeal, or that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims according to auxiliary request 2 filed on 28 February 2017.

Appellant II (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

IV. The decision under appeal refers to, *inter alia*, the following documents:

F1: EP 2 319 883 A1

F1a: Priority document for F1 (CH 11612008)

F2: EP 2 168 752 A2

F6: EP 1 884 539 A1

F7: US 5,858,491

V. Claim 1 as granted (main request) reads (the feature analysis employed by the board is indicated in square brackets):

"1. **[a]** Injection stretch blow-molding process **[b]** for the preparation of polyethylene containers, comprising the following steps:

**[c]** 1) injection molding a polyethylene material into a preform;

**[d]** 2) subjecting the said preform to stretch blow-molding **[e]** with a stretch ratio from 2 to 4;

**[f]** wherein the polyethylene material comprises an ethylene polymer **[g]** having density equal to or greater than  $0.945 \text{ g/cm}^3$  and **[h]** F/E ratio values equal to or greater than 60."

Claim 1 of auxiliary request 1 differs from claim 1 as granted in that feature c is replaced by:

"**[c1]** 1) injection molding a polyethylene material into a preform **[c2]** at a temperature from 210 to 260°C"

VI. The parties' submissions relevant for this decision can be summarised as follows.

(a) *Ground for opposition under Article 100(a) EPC in conjunction with Article 54 EPC*

(i) *Appellant I*

The passages of European patent application F1 cited by the opposition division in the decision under appeal for allegedly disclosing the subject-matter of granted claim 1 differed in two aspects from document Fla, such that F1 was not entitled to the priority of the previous application Fla. The effective filing date of European application F1 was hence 15 July 2009, which was later than the priority date of the opposed patent, meaning that document F1 was not novelty-destroying prior art under Article 54(3) EPC for the claimed subject-matter of the opposed patent. The two differentiating aspects were the following.

First, document F1 was limited to compositions in which the HDPE was at least bimodal with a first melt index of 190 °C/2.16 kg from 0.1 to 0.9 g/10 min. and a second of melt index 190 °C/21.6 kg from 5 to 50 g/10 min. while document Fla, page 4, lines 21 to 27 referred to monomodal or multimodal HDPE.

Second, in claim 1 as granted, two different terms were used: polyethylene material and ethylene polymer. The definition of the F/E ratio in feature h referred to the ethylene polymer which was to be understood as a pure ethylene polymer. In contrast, the passages on page 4, lines 25 to 27 of document Fla and in the last sentence of paragraph [0015] of document F1 related to

the overall plastic formulation, so that the melt index values disclosed could not be attributed to pure HDPE since it did not necessarily amount to the total composition. There was thus no support in documents F1 and F1a for a composition in which the pure HDPE had the melt index values defined on page 4, lines 25 to 27 of document F1a and in the last sentence of paragraph [0015] of document F1.

(ii) *Appellant II*

Regarding the first aspect raised by appellant I, the passage on page 4, lines 21 to 25 of document F1a described a multimodal (at least bimodal) HDPE having a melt index of 0.1 g/10 min. to 0.9 g/10 min. and being also characterised by a second melt index of 5 g/10 min. to 50 g/10 min, the same as in document F1.

Regarding the second aspect, the formulation disclosed in document F1a including at least 60% of HDPE having a density of 0.941 g/cm<sup>3</sup> to 0.965 g/cm<sup>3</sup> and a melt index of 0.1 to 0.9 g/10 min. at 190 °C/2.16 kg according to ISO 1133 (see document F1a, page 3, lines 16 to 19) corresponded to the definition of granted claim 1. Moreover, feature h of granted claim 1 would not have been understood by the skilled person as referring to pure polyethylene but to commercially available polymers.

(b) *Novelty of the subject-matter of claim 1 of auxiliary request 1 in view of document F2*

(i) *Appellant I*

European patent application F2 was not entitled to the priority claimed from the previous application F2a. F2

was an entirely new and different patent application with respect to F2a. So there was no doubt that the applicant of application F2 renounced the priority right by filing a new patent application with a different scope of claims.

The subject-matter of claim 1 of auxiliary request 1 was new over document F2 since document F2 did not disclose feature h in combination with injection stretch blow moulding (see feature a of contested claim 1). It was not unambiguously and directly derivable from paragraph [0027] or the other parts of document F2 that injection stretch blow moulding was to be used in combination with the stretch ratio values mentioned in Table II of document F2. Claim 4 and paragraph [0015] of document F2 further disclosed multiple alternatives in this regard, namely forming the preform by injection moulding, extrusion blow moulding or compression moulding.

(ii) *Appellant II*

Appellant I's statement with respect to the claimed priority from the previous application F2a was erroneous.

The relevant parts of European patent application F2 could be found in previous application F2a. Table II in paragraph [0027] of document F2 referred to only one polymer, Basell Hostalen 6031. This polymer was also mentioned, for example, in Table I in paragraph [0026], where it was stated that this polymer was to be processed by blow moulding which also covered injection blow moulding. All other examples in document F2 used injection stretch blow moulding as well, such that the skilled person would have understood that injection



blow moulding was also used for producing the containers in Table II. Paragraph [0015] of document F2 was a general explanation according to which the teaching of document F2 may be used with other processes. However, in Table II, injection stretch blow moulding was used.

*(c) Inventive step regarding the subject-matter of claim 1 of auxiliary request 1 in view of a combination of document F7 with the skilled person's common general knowledge*

*(i) Appellant I*

The inventive-step objection based on the combination of document F7 with the skilled person's common general knowledge was a new attack that had been raised for the first time in appellant II's statement of grounds of appeal. This objection should not be admitted into the appeal proceedings. Appeal proceedings should deal with issues discussed in the first-instance proceedings. This was reflected in the Rules of Procedure of the Boards of Appeal. New objections were generally not admissible in appeal proceedings. Moreover, appellant II's allegation that the skilled person's common general knowledge comprised a stretch ratio of 2 to 4 (see feature e) was not supported by evidence. There were thus no sound reasons for admitting this objection into the appeal proceedings.

*(ii) Appellant II*

The subject-matter of claim 1 of auxiliary request 1 did not involve an inventive step in view of a combination of document F7 and the skilled person's common general knowledge. The only differentiating

feature in view of document F7 was feature e. However, there were no comparative examples in the opposed patent. Therefore, the objective technical problem was the provision of an alternative injection stretch blow moulding process. The stretch ratio from 2 to 4 as defined in feature e was conventional in the art. In injection stretch blow moulding, it was necessary to mechanically stretch the preform with a rod to produce the final container. A stretch ratio of 2 was among the smallest stretch ratio values for stretching the preform. The person skilled in the art could easily have made routine experimentations to determine the relevant stretch ratios to obtain the desired characteristics.

The inventive-step objection based on the combination of document F7 and the skilled person's common general knowledge was raised in the statement of grounds of appeal in reaction to the reasons for the decision under appeal. These reasons were erroneous since the opposition division concluded that the skilled person would not have combined documents F7 and F6 to solve the objective technical problem posed since, in the opposition division's view, document F6 dealt with injection stretch blow moulding of polypropylene containers and not with polyethylene containers. The latter was, however, incorrect. The decision under appeal was the first time that it was stated that documents F7 and F6 could not be combined. This conclusion was also surprising since both documents were from the same technical field. Moreover, the content of document F6 was equivalent to the skilled person's common general knowledge.

(d) *Inventive step regarding the subject-matter of claim 1 of auxiliary request 1 in view of a combination of documents F7 and F6*

(i) *Appellant I*

The inventive-step objection in view of a combination of documents F7 and F6 had been raised for the first time in appeal proceedings during the oral proceedings before the board. It was thus late filed and should not be admitted into the appeal proceedings. While appellant I's statement of grounds and appellant I's reply to appellant II's statement of grounds had referred to the combination of documents F7 and F6, this had been done for substantiating appellant I's requests. This had nothing to do with the appeal filed by appellant II.

As to the substance of this objection, the skilled person would not have considered document F6 because the problem posed in the patent related to the balance of mechanical and optical properties of containers made of polyethylene. In contrast, document F6 sought to improve the properties of polypropylene containers (see paragraph [0008]). Paragraphs [0036] and [0037] of document F6 cited by appellant II referred to polypropylene too. The processing conditions in document F6 were typical for polypropylene but not for polyethylene. The processing conditions had to correlate with the composition of the polymer material being processed. The stretch conditions were therefore dependent on the polymer used. There had not been any suggestion that the processing conditions set out in document F6 would also be beneficial for polyethylene containers described in document F7. Nor did the small quantity of polyethylene in the polyolefin composition

of document F6 fit the definition of the polyethylene material in claim 1.

Moreover, feature e was not the only difference between claim 1 and document F7. While the passage in column 12, lines 19 and 20 of document F7 explained that typical moulding temperatures were in the range of from 150 to 250 °C, there was no disclosure regarding the injection temperature. Document F6 was silent about the injection temperature as well.

(ii) *Appellant II*

The subject-matter of claim 1 of auxiliary request 1 did not involve an inventive step in view of a combination of documents F7 and F6. Feature c2 of claim 1 was disclosed in column 12, lines 19 and 20 of document F7. The only differentiating feature was thus feature e. No technical effect could be attributed to this feature. Therefore, the objective technical problem was the provision of an alternative injection stretch blow moulding process.

The opposition division's view that document F6 only referred to polypropylene was incorrect. The title and paragraph [0001] of document F6 referred instead to a polyolefin composition. Paragraphs [0036] and [0037] furthermore stressed the useful properties of polyethylene, thus suggesting the use of polyethylene. In document F6, the same polymer as in document F7 and in the patent was used, polyethylene, although polypropylene was additionally present in the composition of document F6.

Moreover, feature e referred to the process and not to the polymer used. The mechanical process was thus not dependent on the polymer.

Inventive step in view of a combination of documents F7 and F6 had furthermore been addressed in appellant I's statement of grounds of appeal and in appellant I's reply to appellant II's statement of grounds of appeal. This objection was thus not discussed for the first time in the oral proceedings before the board.

## **Reasons for the Decision**

1. Main request: Ground for opposition under Article 100(a) EPC in conjunction with Article 54 EPC

In the decision under appeal, the opposition division concluded that the subject-matter of claim 1 as granted lacked novelty over the disclosure of document F1, the content of which was considered by the opposition division to be comprised in the state of the art pursuant to Article 54(3) EPC as far as it was entitled to the priority claimed from Swiss patent application F1a (see point 4 of the Reasons).

Appellant I, however, argues that claim 7 of document F1 (which was cited by the opposition division in point 4.4 of the Reasons with reference to claim 1 of the patent as granted) was not entitled to priority, so that its effective filing date was 15 July 2009, thus later than the priority date of the opposed patent. Appellant I submits that the passages of document F1 cited by the opposition division differed from document F1a in the following two aspects.

First, document F1 was limited to compositions where the HDPE was at least bimodal with a first melt index of 190 °C/2.16 kg from 0.1 to 0.9 g/10 min. and a second melt index of 190 °C/21.6 kg from 5 to 50 g/10 min. while document Fla, on page 4, lines 21 to 27 referred to monomodal or multimodal HDPE.

Second, the passages on page 4, lines 25 to 27 of document Fla and in the last sentence of paragraph [0015] of document F1 related to the overall plastic formulation, so that the melt index values disclosed could not be attributed to pure HDPE. In contrast, the F/E ratio defined in feature h related to the pure ethylene polymer.

The board observes that document F1 is the publication of 11 May 2011 of a European patent application filed on 15 July 2009, which is accorded a priority date of 24 July 2008, while the earliest priority date accorded to the opposed patent is 23 October 2008. Hence, the content of document F1 is considered as comprised in the state of the art under Article 54(3) EPC for the patent in suit only to the extent that the priority claimed from previous application Fla is valid for that content.

Furthermore, in accordance with opinion G 2/98, the requirement for claiming priority from "the same invention", referred to in Article 87(1) EPC, means that priority from a previous application for a claim in a European patent application in accordance with Article 88 EPC is to be acknowledged only if the skilled person can derive the subject-matter of the claim directly and unambiguously, using common general knowledge, from the previous application as a whole.

When comparing claim 1 of the patent as granted with the disclosure of document F1, for feature h of claim 1, the opposition division referred to paragraph [0015] of document F1 (see point 4.6 of the Reasons). Apparently, regarding feature h, the opposition division considered the values indicated in the last sentence of paragraph [0015] and thus arrived at an F/E value of 100 (30 divided by 0.3). As a basis for the above passage of document F1 in the priority application F1a, the opposition division considered page 4, lines 21 to 27 of document F1a (see point 4.4 of the Reasons).

Regarding the first aspect identified by appellant I, the last sentence of paragraph [0015] of document F1, apparently considered by the opposition division for feature h, mentions a bimodal distribution ("*bimodale Verteilung*"), like in the last sentence of the cited text passage of document F1a. There is thus no difference between the last sentences of the cited passages of documents F1 and F1a in this regard.

The first two sentences of paragraph [0015] of document F1 cited above are less relevant since the calculation of the F/E value by the opposition division was based on the third sentence of this paragraph and not the first two. In the first sentence of paragraph [0015] of document F1, reference is made to bimodal or multimodal HDPE ("*bi- oder multimodales HDPE*"), while in the first sentence of the cited passage of document F1a, reference is made to a monomodal or multimodal HDPE ("*monomodales oder multimodales HDPE*"). In other words, document F1a explicitly discloses two alternatives, namely monomodal HDPE and multimodal HDPE, while only the latter of

these two alternatives is included in the cited passage of document F1. However, as correctly assessed by the opposition division (see point 4.5 of the Reasons), the fact that one of the two alternatives explicitly indicated in document Fla is not included in document F1 does not alter the finding that the one alternative that is included in document F1 is unambiguously and directly derivable from document Fla.

As to the second aspect addressed by appellant I, the last sentences of each of the passages of documents F1 and Fla cited above refer to the melt index of the plastic formulation. Hence, there is no difference between the disclosure of these documents in this regard. According to the passages preceding the above citations, the plastic formulation includes at least 90% HDPE (see document F1, paragraph [0013], first sentence and document Fla, page 4, line 7). Hence, the melt index values indicated in the last sentences of the passages cited above refer to a plastic formulation with at least 90% HDPE and thus not necessarily to "pure" HDPE, as also correctly pointed out by appellant I.

However, feature h of claim 1 does not specifically relate to the F/E ratio of "pure" HDPE but to the F/E ratio of the polyethylene material. According to paragraphs [0017] and [0018] of the patent:

*"[0017] The said ethylene (co)polymers can also contain conventional additives.*

*[0018] Examples of these additives are heat stabilizers, antioxidants, UV absorbers, light stabilizers, metal deactivators, compounds which destroy peroxide, and basic costabilizers,*



*typically in amounts of from 0.01 to 10 % by weight, preferably from 0.1 to 5 % by weight."*

Hence, according to the description of the patent, the "ethylene (co)polymer" is not necessarily "pure" but can contain up to 10% additives. The skilled person would have considered this explicit disclosure when interpreting claim 1. Consequently, the plastic formulation mentioned in the above passages of documents F1 and F1a (comprising at least 90% HDPE) falls within the definition of the ethylene polymer according to the patent. Feature h is thus disclosed in documents F1 and F1a.

In view of the above, appellant I's submissions do not allow the conclusion that the priority claim of document F1 in respect of document F1a is not valid or that the opposition division's conclusion that the subject-matter of claim 1 as granted was not new over document F1 is incorrect.

The subject-matter of claim 1 as granted thus lacks novelty over document F1. Therefore, the ground for opposition under Article 100(a) EPC in conjunction with Article 54 EPC prejudices the maintenance of the patent as granted.

## 2. Auxiliary request 1

### 2.1 Novelty (Article 54 EPC)

The parties disagree on whether the priority claimed from previous application F2a is valid for the content of European patent application F2, so that it can be considered as comprised in the state of the art under

Article 54(3) EPC when considering novelty. They also disagree on whether feature h of claim 1 of auxiliary request 1 is disclosed in document F2 in combination with the feature of injection stretch blow moulding (see feature a).

Appellant II considers feature h to be disclosed in Table II in paragraph [0027] of document F2. It is, however, undisputed that paragraph [0027] itself does not expressly indicate whether the containers described in Table II were produced using injection stretch blow moulding. Yet, in this regard, appellant II takes the view that Table II should be read in the context of the other tables in document F2. Appellant II points out that Table II specifically refers to the commercial product Basell Hostalen 6031. In its view, from Table I, it could be inferred that "Blow Molding" was used for Basell 6031. The term "Blow Molding" also covered injection stretch blow moulding.

This line of arguments is, however, not convincing. While a polyethylene resin from the supplier Basell having a grade of 6031 and a grade type of "Blow Molding" is mentioned in Table I of document F2, this does not imply that the containers described in Table II (which refers to Basell Hostalen 6031) were produced using injection stretch blow moulding. While the term blow moulding used in Table I covers injection stretch blow moulding, it is not restricted to this but also encompasses, for example, injection or extrusion blow moulding. The latter is also explicitly mentioned in claim 4 and in the last sentence of paragraph [0015] of document F2. While in other passages of document F2 reference is made to injection stretch blow moulding, this does not necessarily imply that injection stretch

blow moulding was used to produce the containers as described in Table II.

Consequently, document F2 does not disclose the combination of features a and h. The subject-matter of claim 1 of auxiliary request 1 is thus new over document F2, as is also, consequently, the subject-matter of dependent claims 2 to 5. Thus, the validity of the priority claimed in European patent application F2 is no longer relevant because earlier applications are only considered to be comprised in the state of the art under Article 54(3) EPC for the examination of novelty.

## 2.2 Inventive step (Article 56 EPC)

### 2.2.1 *Inventive step in view of a combination of document F7 with the skilled person's common general knowledge*

In its statement of grounds of appeal, appellant II raised for the first time an objection that the subject-matter of claim 1 according to auxiliary request 1 did not involve an inventive step in view of a combination of document F7 with the skilled person's common general knowledge. Appellant I considers this objection to be late filed and contests its admittance into the appeal proceedings.

In the case at hand, appellant II filed its statement of grounds of appeal before the date on which the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) entered into force, i.e. 1 January 2020 (see OJ EPO 2021, A35). Thus, in accordance with Article 25(2) RPBA 2020, Article 12(4) to (6) RPBA 2020 does not apply. Instead, Article 12(4)

of the Rules of Procedure of the Boards of Appeal in the version of 2007 (RPBA 2007 - see OJ EPO 2007, 536) continues to apply.

In accordance with Article 12(4) RPBA 2007, the board has the power to hold inadmissible facts, evidence or requests which could have been presented or were not admitted in the first-instance proceedings. The board thus has discretion not to admit the objection that the subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step in view of a combination of document F7 with the skilled person's common general knowledge into the appeal proceedings if this objection could and should have been filed in the first-instance proceedings.

Appellant II submits that the objection of lack of inventive step, based on the combination of document F7 with the skilled person's common general knowledge, could not have been raised at an earlier stage as it was raised in reaction to the reasons given in the decision under appeal, where it was stated for the first time that documents F7 and F6 could not be combined. However, this reasoning was erroneous as the opposition division concluded that the skilled person would not have combined documents F7 and F6 since, in the opposition division's view, document F6 dealt with injection stretch blow moulding of polypropylene containers and not with polyethylene containers.

The board is not convinced that raising the objection of lack of inventive step in view of document F7 in combination with the skilled person's common general knowledge was a direct response to the reasoning of the decision under appeal. In the first-instance proceedings, *inter alia*, a combination of document F7

with document F6 had been discussed (see, for example, point 8.1 of the Reasons and point 8 of the minutes of the oral proceedings before the opposition division). As apparent from the reasons given in its decision, the opposition division did not share the opponent's view that feature e would have been obvious to the skilled person starting from document F7 and consulting document F6 (see points 8.1.7 of the Reasons). It was instead concluded that document F6 dealt with injection stretch blow moulding of polypropylene containers and not with polyethylene containers. Moreover, according to the reasons for the decision under appeal, the skilled person would therefore not have considered document F6 when trying to solve the objective technical problem, which the opposition division considered to be developing an alternative injection stretch blow moulding process for the preparation of polyethylene containers.

A direct response to the decision should have addressed the line of reasoning given by the opposition division, for example, relating to the disclosure of document F7 and/or F6 and the considerations that could have led the skilled person to combine these documents. However, with the new objection of lack of inventive step, appellant II does not address the reasoning and conclusion of the opposition division to show that this was incorrect and that the skilled person would indeed have combined documents F7 and F6.

This also applies in view of appellant II's assertion that the content of document F6 in this regard would be equivalent to the skilled person's common general knowledge. This assertion has not been corroborated by any evidence.

Raising the inventive-step objection in view of a combination of document F7 with the skilled person's common general knowledge in the statement of grounds of appeal was thus not a direct response to the reasons for the decision under appeal and was not occasioned by the reasoning on which the decision is based. This objection could and should therefore have been raised as a further objection of lack of inventive step in the first-instance proceedings. Consequently, the board has discretion under Article 12(4) RPBA 2007 not to admit this objection in to the appeal proceedings.

It is not *prima facie* evident that this objection would prejudice the maintenance of the patent as amended according to auxiliary request 1. Even if it were assumed that appellant II's assessment was correct that the only difference between the subject-matter of claim 1 of auxiliary request 1 and document F7 was feature e and that the objective technical problem with respect to this feature was the provision of an alternative injection stretch blow moulding process, appellant II has not convincingly shown that a stretch ratio from 2 to 4 was part of the skilled person's common general knowledge and that the skilled person would have used it in the process of document F7. This is thus a mere allegation not supported by evidence.

In view of the above, the board, exercising its discretion under Article 12(4) RPBA 2007, decided not to admit the objection of lack of inventive step based on document F7 in combination with the skilled person's common general knowledge into the appeal proceedings.

2.2.2 *Inventive step in view of a combination of documents F7 and F6*

(a) *Admittance of the objection of lack of inventive step in view of a combination of documents F7 and F6*

Appellant I submits that the objection of lack of inventive step in view of a combination of documents F7 and F6 was raised for the first time in the oral proceedings before the board. In its view, it was thus late filed and should not be admitted into the appeal proceedings.

The board does not share this view. Appellant I had previously discussed the combination of documents F7 and F6 in relation to inventive step regarding the claims as granted (see pages 3 to 5 of its statement of grounds of appeal) and regarding the claims of auxiliary request 1 (see page 3 of its reply to appellant II's statement of grounds of appeal). The combination of documents F7 and F6 has thus been discussed in the context of inventive step from the outset of the appeal proceedings, also in view of claim 1 of auxiliary request 1. This finding is furthermore unaffected by appellant I's explanation that it discussed inventive step in view of the combination of documents F7 and F6 in its statement of grounds of appeal and in its reply only to substantiate its requests and not to help appellant II in its own appeal.

In the oral proceedings, appellant II contested appellant I's view (expressed in appellant I's reply to appellant II's statement of grounds of appeal) that the

subject-matter of claim 1 of auxiliary request 1 involved an inventive step in view of a combination of documents F7 and F6. However, this contestation of appellant I's view does not change the scope of the discussion. Appellant II's statement of grounds of appeal also discussed the presence of an inventive step in view of the combination of documents F7 and F6, although in relation to dependent claims 4 and 5 as granted (see points 3.4 and 3.5).

Incidentally, the objection of lack of inventive step against claim 1 of auxiliary request 1 based on a combination of documents F7 and F6 had been discussed in the opposition proceedings (see, for example, point 8.1.7 of the Reasons).

In view of the above, the board concludes that the objection that the subject-matter of claim 1 of auxiliary request 1 did not involve an inventive step in view of the combination of documents F7 and F6 stays within the framework established by the decision under appeal and the parties' respective statements of grounds of appeal and replies. Under these circumstances, the board sees no legal basis for not admitting this objection into the appeal proceedings.

The combination of documents F7 and F6 was thus taken into account for the assessment of inventive step.

*(b) Merits of the objection of lack of inventive step in view of a combination of documents F7 and F6*

Appellant II submits that the only differentiating feature of claim 1 of auxiliary request 1 in view of document F7 was feature e, i.e. a stretch ratio from 2



to 4. However, in its view, there were no comparative examples in the opposed patent. Therefore, the objective technical problem was the provision of an alternative injection stretch blow moulding process. A stretch ratio from 2 to 4 was furthermore known from document F6.

Appellant I did not contest appellant II's view that document F7 was a suitable starting point for assessing inventive step and that this document did not disclose feature e. However, appellant I took the view that document F7 also did not disclose feature c2 and that the skilled person would not have combined document F7 with document F6.

Regarding feature c2, appellant I submits that the passage in column 12, lines 19 and 20 of document F7 discloses that typical moulding temperatures were in the range of from 150 to 250 °C but that there was no disclosure regarding the injection temperature.

While this may be true, features c1 and c2 of claim 1 of auxiliary request 1 read:

*"[c1] 1) injection molding a polyethylene material into a preform [c2] at a temperature from 210 to 260°C"*

Hence, the temperature range defined in feature c2 refers to the temperature at which the injection moulding (see feature c1) is carried out. The temperature in feature c2 is thus the moulding temperature. Similarly, the passage in column 12, lines 19 and 20 of document F7 refers to moulding temperatures:

*"Typical molding temperatures are in the range of from 150°C. to 250°C."*

This passage also explicitly discloses a moulding temperature of 250 °C, which falls within the range defined in feature c2 of claim 1.

Feature c2 is thus disclosed in document F7. Consequently, the only differentiating feature is feature e.

However, even if it were assumed that the formulation of the objective technical problem suggested by appellant II (the provision of an alternative injection stretch blow moulding process) was correct, the solution provided by claim 1 would not have been obvious to the skilled person in view of document F6 for the following reasons.

It is undisputed that document F7 relates to a polyethylene moulding composition. Document F6, in contrast, relates to an injection stretch blow moulding process using a polyolefin composition comprising polypropylene and a polyethylene (see, for example, paragraph [0009]). While paragraphs [0036] and [0037] suggest that adding polyethylene to polypropylene has beneficial effects, these passages do not hint at using a composition that comprises only polyethylene and no polypropylene. Hence, document F6 does not suggest that the injection stretch blow moulding process that it describes can be applied to a polyethylene composition that does not contain polypropylene, such as the polyethylene composition described in document F7.

Moreover, appellant II's assertion that the skilled person would have understood that the parameters of the

mechanical process disclosed in document F6 were unrelated to the chemical composition of the polymer material to be processed is not convincing. This assertion is not supported, and the cited passages of documents F7 and F6 do not contain any suggestion in this regard. Quite to the contrary, the skilled person is aware that the type of polymer and the chemical composition of the material to be moulded affect the mechanical properties. There is no evidence supporting the allegation that the skilled person would have considered that the polyolefin composition of document F6 (comprising polypropylene and polypropylene) and the polyethylene composition of document F7 had properties sufficiently similar to allow quantitative parameters of the process of document F6, such as the stretch ratio, to be employed in an identical manner for the process of document F7.

Therefore, even if the skilled person had consulted document F6 in an attempt to solve the objective technical problem suggested by appellant II, it has not been demonstrated that they would have extracted the stretch ratio described in the context of processing the composition in document F6 (comprising polypropylene) and used it for processing the polyethylene composition of document F7. Such a consideration is the result of an inadmissible ex-post facto analysis.

Consequently, the subject-matter of claim 1 of auxiliary request 1 involves an inventive step in view of the combination of documents F7 and F6.

3. Summary

Since the ground for opposition under Article 100(a) EPC in conjunction with Article 54 EPC prejudices the maintenance of the patent as granted and since appellant II's objections do not prejudice the maintenance of the patent as amended according to auxiliary request 1, both appeals must be dismissed.

**Order**

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

The appeals are dismissed.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated