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**Datasheet for the decision
of 19 October 2022**

Case Number: T 2886/19 - 3.3.03

Application Number: 14710696.7

Publication Number: 2961780

IPC: C08F210/16, C08F4/6592,
C08L23/08

Language of the proceedings: EN

Title of invention:

POLYMER RESINS WITH IMPROVED PROCESSABILITY AND MELT FRACTURE
CHARACTERISTICS

Patent Proprietor:

Chevron Phillips Chemical Company LP

Opponent:

TotalEnergies One Tech Belgium

Relevant legal provisions:

RPBA 2020 Art. 11, 12(6) sentence 2
EPC Art. 111(1)

Keyword:

Late-filed facts - error in use of discretion at first instance (no)

Late-filed facts - should have been submitted in first-instance proceedings (yes)

Remittal - special reasons for remittal

Decisions cited:

T 0299/97, T 0943/00, T 1127/02



Beschwerdekammern

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Case Number: T 2886/19 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 19 October 2022

Appellant: TotalEnergies One Tech Belgium
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
5 September 2019 concerning maintenance of the
European Patent No. 2961780 in amended form.**

Composition of the Board:

Chairman D. Semino
Members: M. Barrère
W. Ungler

Summary of Facts and Submissions

I. The appeal of the opponent lies against the decision of the opposition division concerning maintenance of European Patent number 2 961 780 in amended form on the basis of the claims of auxiliary request 1 filed during oral proceedings on 18 June 2019 and an amended description.

II. Claim 1 of auxiliary request 1 read as follows:

"1. A metallocene-catalyzed polymer comprising (i) a higher molecular weight component and (ii) a lower molecular weight component wherein the polymer has a polydispersity index of from 10 to 26; a zero shear viscosity of from 5×10^5 Pa.s to 2×10^{14} Pa.s; and a smooth-to-matte transition critical stress of from 20 kPa to 85 kPa at a shear rate of from 1.5 s^{-1} to 17 s^{-1} ." (emphasis added by the Board)

III. The following documents were *inter alia* cited in the opposition division's decision:

F1: US 2012/0316311 A1

F2: WO 2014/052364 A1

F3: WO 2014/120540 A1

F4: WO 02/36678 A1

F6: M. Ansari et al., "Melt Fracture of Two Broad Molecular Weight Distribution High Density

Polyethylenes", Polymer Engineering and Science, 2012, pages 795 to 804

F7: M. Ansari et al., "Rheology of Ziegler-Natta and metallocene high-density polyethylenes: broad molecular weight distribution effects", Rheol. Acta, 2011, 50, pages 17 to 27

IV. In that decision the opposition division held, among others, that:

- Documents F6 and F7 were *prima facie* relevant and were therefore admitted into the proceedings.
- The subject-matter of claim 1 of auxiliary request 1 was novel over each of documents F1 to F4. In particular, there was no clear and unambiguous disclosure in F1 to F4 of a polymer characterised by a smooth-to-matte transition (SMT) as defined in claim 1.
- F1 was the closest prior art for claim 1 of auxiliary request 1. The subject-matter of claim 1 differed from the disclosure of F1 in the zero-shear viscosity and the smooth-to-matte transition. The problem to be solved was the provision of an alternative polymer with good processability. The skilled person would not find any hint in the prior art on how to obtain a polymer with a smooth-to-matte transition as defined in claim 1. Claim 1 was therefore inventive over F1 as the closest prior art.

V. The opponent (appellant) filed an appeal against the above decision and submitted the following documents with the statement of grounds of appeal:

F8: M. Ansari et al. "Melt Fracture of HDPEs: Metallocene versus Ziegler-Natta and broad MWD effects" *Polymers*, 53, 2012, pages 4195 to 4201

F9: "Handbook of polyethylene, Structures, Properties and Applications", ISBN: 0-8247-9546-6, 2000, pages 222 to 225 and 232 to 237

- VI. With the rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) filed auxiliary requests 2 to 12.
- VII. The parties were summoned to oral proceedings with the notification of 6 December 2021 and a communication pursuant to Article 15(1) RPBA 2020 was sent to the parties, where among others the Board agreed with the finding of the opposition division according to which documents F1 to F4 did not directly and unambiguously disclose a polymer having a SMT as defined in claim 1 of auxiliary request 1 (points 6.1.2 to 6.1.4 and 6.2 of the communication).
- VIII. With letter of 22 July 2022, the respondent filed auxiliary requests 11 to 14.
- IX. By letter dated 8 August 2022 and filed on 29 August 2022, the appellant expressed concerns about the scope of claim 1 of auxiliary request 1. In particular, it was argued that the measuring conditions of the SMT parameters were not mentioned in claim 1. Hence the appellant held that claim 1 could not be limited to a specific measurement method.
- X. Oral proceedings were held before the Board on 19 October 2022.

XI. The final requests of the parties were as follows:

(a) The appellant requested that the decision under appeal be set aside and the patent be revoked.

(b) The respondent requested that the decision under appeal be set aside and the case be remitted to the opposition division for further prosecution.

XII. The present decision is based on auxiliary request 1 as maintained by the opposition division (for the wording of claim 1, reference is made to the above point II.).

The remaining claims of auxiliary request 1 as well as the claims of auxiliary request 2-14 are not relevant to this decision.

XIII. The appellant's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Admittance of F6 and F7

F6 and F7 concerned the relationship between the various properties of the polymer as defined in claim 1 of auxiliary request 1 and should therefore remain in the proceedings.

(b) Admittance of F8 and F9

F8 related to the relationship between the molecular weight distribution (MWD) of a polymer and the SMT parameters. F9 illustrated the common general knowledge

in the field of polyethylenes. These documents should therefore be admitted into the proceedings.

(c) Reading of claim 1 of auxiliary request 1

Claim 1 was not limited to a specific method to measure the SMT parameters. Therefore, claim 1 should be interpreted broadly.

(d) Remittal

No objection was raised to the remittal of the case to the opposition division.

XIV. The respondent's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Admittance of F6 and F7

F6 and F7 were not *prima facie* relevant and should have been filed with the notice of opposition. Therefore these documents should not be admitted into the proceedings.

(b) Admittance of F8 and F9

F8 and F9 were not *prima facie* relevant and no explanation for their admittance was given in the statement of grounds of appeal. Therefore these documents should not be admitted into the proceedings.

(c) Reading of claim 1 of auxiliary request 1

The description of the opposed patent provided a clear guidance on how to measure the SMT parameters. Therefore the limitation of the scope of claim 1 by said parameters was clear.

(d) Remittal

In view of the reading of claim 1 by the Board, the case should be remitted to the opposition division.

Reasons for the Decision

1. Admittance of documents F6 and F7
 - 1.1 F6 and F7 were filed by the appellant with the letter dated 18 April 2019 and admitted by the opposition division into the proceedings.
 - 1.2 The respondent objected to the admittance of F6 and F7 to the proceedings on the grounds that these documents were not *prima facie* relevant and should have been filed with the notice of opposition (see rejoinder to the statement of grounds of appeal, page 2, paragraph 2.5).
 - 1.3 According to the established case law, in particular decision G 7/93 (OJ EPO 1994, 775), point 2.6 of the reasons, Boards of appeal should only overturn discretionary decisions of the first instance if it is concluded that the first instance exercised its discretion according to the wrong principles, or without taking into account the right principles or in an unreasonable way.

1.4 According to the contested decision (see point 3 of the reasons), F6 and F7 were admitted into the proceedings because they were:

prima facie relevant to understand the relationship between the different parameters of claim 1 and

filed in reaction to arguments put forward by the opposition division in its preliminary opinion.

1.5 For the Board, the principles used by the opposition division are correct (see Case Law of the Boards of Appeal, 9th edition 2019, IV.C.4.5.1). Furthermore, in view of the fact that F6 and F7 pertain to the SMT (referred to as the "melt fracture" in F6) and the MWD of polyethylenes, the application of the principle of *prima facie* relevance is reasonable. Accordingly, the Board has no reason to consider that the first instance did not correctly exercise its discretion in admitting F6 and F7 into the proceedings.

1.6 The Board therefore decides not to overturn the decision of the opposition division with the consequence that F6 and F7 remain part of the proceedings.

2. Admittance of documents F8 and F9

2.1 F8 and F9 were filed by the appellant with the statement of grounds of appeal. Their admission to the proceedings, which is contested by the respondent, is subject to the discretionary power of the Board in accordance with Article 12, paragraphs 4 to 6 RPBA 2020.

These documents are directed to establishing that claim 1 of auxiliary request 1 lacks an inventive step over F1 as the closest prior art (see statement of grounds of appeal, page 15, 5th, 6th and last paragraphs).

- 2.2 The admittance of F8 and F9 is contested by the respondent for the following reasons (see rejoinder to the statement of grounds of appeal, page 2, paragraph 2.5):

F8 and F9 were not *prima facie* relevant,

the appellant did not provide reasons in the statement of grounds of appeal for submitting F8 and F9,

these documents should have been filed during opposition proceedings.

- 2.3 During the oral proceedings, the appellant argued that F8 and F9 were submitted in reaction to the surprising decision of the opposition division in view of the relevance of the polydispersity index. Moreover F9 merely represented the common general knowledge in the field of polyethylenes.

- 2.4 Contrary to the appellant's view, the Board cannot identify any part of the contested decision which had not been discussed in details during opposition proceedings and could come as a surprise to the parties. In particular it is pointed out that the conclusion reached in the contested decision did not differ from the preliminary opinion of the opposition division. Furthermore, if the appellant had intended to support its attack of lack of inventive step in view of the polydispersity index by submitting F8 and F9, these

documents should have been filed during opposition proceedings. Moreover, no reasons were provided by the appellant with the statement of grounds for submitting the documents in the appeal proceedings.

2.5 Under these circumstances, the Board finds it appropriate to exercise its discretion under Article 12(6) RPBA 2020 by not admitting documents F8 and F9 into the proceedings.

3. Auxiliary request 1

3.1 Reading of claim 1

Claim 1 is directed to a polymer having among other features a smooth-to-matte transition (SMT) critical stress of from 20 kPa to 85 kPa at a shear rate of from 1.5 s⁻¹ to 17 s⁻¹.

3.1.1 With the letter dated 8 August 2022 and filed on 29 August 2022, the appellant argued that claim 1 was not limited to any specific method to measure the SMT parameters (see page 6, second and third paragraphs of the letter). Considering that the SMT depends, *inter alia*, on temperature, claim 1 should therefore be interpreted broadly (since the measuring conditions are not mentioned in claim 1). In this context, reference was made to tables 3 to 6 of F6.

3.1.2 The respondent considered that the issues raised by the appellant were questions of clarity which were not to be discussed during opposition proceedings. Moreover the arguments put forward by the appellant were late-filed since they were only presented shortly before oral proceedings.

In any case, the respondent took the view that the opposed patent provided detailed conditions to measure the SMT parameters (see paragraphs [0049] and [0062]). Moreover, independently of the effect of the measuring conditions on the results, the burden of proof to show that the polymer of the prior art were characterised by SMT parameters according to claim 1 lay with the appellant.

- 3.1.3 For the Board, the issues raised by the appellant relate essentially to the scope of claim 1. Understanding and, if necessary, redefining the scope of the claims (with respect to any possible previous reading) is an essential prerequisite of any assessment of novelty and inventive step, all the more if it concerns the central parameter on which novelty and inventive step are acknowledged. Therefore the Board cannot ignore the appellant's arguments even if they were presented at a late stage of the proceedings.
- 3.1.4 In the present case, the first question posed by the parties is whether the SMT parameters as defined in claim 1 are to be measured with a specific method or whether any suitable method can be used.

It is first pointed out that claim 1 does not specify the method and the conditions in which the SMT parameters are to be measured. Already for this reason the Board considers that claim 1 is not limited to any SMT measurement method.

Furthermore, even if the description of the patent is taken into account, the same conclusion is reached. Contrary to the respondent's view, the specific method disclosed in paragraph [0062] of the opposed patent is only part of the examples. In fact, paragraph [0049]

makes it clear that the extrusion experiment (which is a method used to characterise the SMT or "melt fracture behaviour") may be carried out using any suitable methodology (see opposed patent, page 8, lines 17 to 19).

It follows that the SMT parameters as defined in claim 1 can be measured using any suitable method (and not only the method of paragraph [0062]).

- 3.1.5 The second question to be answered is whether the scope of claim 1 is affected by the previous finding (in other words whether the method used has an influence on the SMT parameters).

The appellant provided evidence showing that the parameters measured at the SMT onset highly depend on the temperature, type of die and die entrance angle (see F6, table 3 to 6). As a matter of example, for a given polyethylene, F6 shows that the critical shear rate can range from 2.4 to 501 s⁻¹ depending on the temperature (see F6, table 5). The same applies to the critical shear stress varying from 60 kPa to 280 kPa.

The respondent argued that the data provided in F6 could not be generalised to the metallocene-catalysed polymer according to the opposed patent. The Board cannot follow this line of argument because F6 shows a similar behaviour for a metallocene-catalysed polyethylene (see F6, table 4). Besides it is notorious that the viscosity of polymers is highly temperature dependent. It is therefore not surprising that the SMT of polymers (which is a rheological phenomenon) follows the same dependency.

Hence, the consequence of the absence of the method used to measure the SMT parameters in claim 1 is that there is a lack of a clear definition of these parameters. While clarity is not a ground for opposition under Article 100 EPC, it nevertheless affects the scope of the claims and the assessment of novelty and inventive step.

According to established case law, the normal rule of claim construction is that the terms used in a claim should be given their broadest technically sensible meaning. In the absence of a clear definition of the conditions under which the measurement is carried out (temperature, die type and die angle), the skilled person is free to choose from a large number of possible conditions as long as they are technically reasonable. In this regard, the Board follows the principles laid down among others in the decisions T 299/97 (point 1.2), T 1127/02 (points 5 to 7) or T 943/00 (point 10.6).

It follows from this finding that the limitation introduced by the SMT parameters is narrow in the sense that it only excludes polymers for which no technically reasonable measuring conditions (temperature, die type and die angle) can be found in which the SMT parameters are according to claim 1.

3.2 Remittal

3.2.1 In view of the above reading of claim 1 by the Board, the respondent requested that the case be remitted to the opposition division for further prosecution. The appellant had no objection against the remittal.

3.2.2 According to Article 11 RPBA 2020 the Board shall not remit the case to the department whose decision was appealed for further prosecution, unless special reasons present themselves for doing so. In the explanatory notes to Article 11 RPBA 2020 (see Supplementary publication 1, OJ EPO 2020, Annex 2, page 215) it is indicated that the aim of the new provision is to reduce the likelihood of a "ping-pong" effect between the Boards and the departments of first instance, and a consequent undue prolongation of the entire proceedings before the EPO. However, it is also specified therein that whether "special reasons" present themselves is to be decided on a case-by-case basis.

3.2.3 In the present case, a central aspect of the assessment of novelty and inventive step in the contested decision was the fact that documents F1 to F4 did not directly and unambiguously disclose a polymer characterised by SMT parameters as defined in claim 1 (see contested decision, points 5.3.1 to 5.4 of the reasons).

The Board understands from the last paragraph of page 5 of the contested decision (albeit in the context of the analysis of sufficiency of disclosure) that the opposition division assumed that the SMT parameters were clearly defined and measured under the specific conditions mentioned in paragraph [0062] of the opposed patent, i.e. at 190°C using a specific rheometer and a specific capillary die with an entrance angle of 180°.

3.2.4 However, with the letter dated 8 August 2022 and filed on 29 August 2022, the appellant contested for the first time this assumption and the Board came to the conclusion that the SMT parameters as set out in claim 1 were not limited to a specific method.

Furthermore, in view of the dependency of the SMT parameters on the measuring conditions (and in particular on the temperature), the Board also considered that the limitation introduced by these parameters was much narrower than initially assumed by the opposition division (see above point 3.1.5).

- 3.2.5 On the one hand, the new reading of claim 1 has a significant impact on the breadth of the claims (increasing the scope of claim 1) and possibly on the assessment of novelty and inventive step.

On the other hand, it is acknowledged that the respondent was confronted with this new claim interpretation only at a very late stage of the proceedings and was therefore not in a position to react appropriately.

This situation is seen by the Board to constitute "special reasons" within the meaning of Article 11 RPBA 2020 to remit the case for further prosecution to the department whose decision was appealed.

- 3.3 Consequently, in order to respect the right of the respondent to a fair trial, the Board finds it appropriate to remit the case to the opposition division in order to re-evaluate the novelty and inventive step of auxiliary request 1 under consideration of the new reading of claim 1 (Article 111(1) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



D. Hampe

D. Semino

Decision electronically authenticated