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Datasheet for the decision of 4 July 2022

Case Number: T 1199/21 - 3.3.03

Application Number: 13823429.9

Publication Number: 2868697

IPC: C08L9/06, B60C1/00, C08F236/06, C12P5/00, C12P5/02, C12P7/16, C08F136/06, C08F36/06

Language of the proceedings: EN

Title of invention:
METHOD OF PRODUCING RUBBER COMPOSITION FOR TYRES

Patent Proprietor:
Sumitomo Rubber Industries, Ltd.

Opponent:
Compagnie Générale des Etablissements Michelin

Relevant legal provisions:
EPC Art. 112(1)(a), 123(2), 111(1)
RPBA 2020 Art. 12

Keyword:

Oral proceedings - change of date (no)
Referral to the Enlarged Board of Appeal - (no)
Amendments - Main request and auxiliary requests 1a-21 - extension beyond the content of the application as filed (yes) - Auxiliary request 22 - extension beyond the content of the application as filed (no)
Remittal - special reasons for remittal

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Case Number: T 1199/21 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 4 July 2022

Appellant: (Patent Proprietor)	Sumitomo Rubber Industries, Ltd. 6-9, Wakinohama-cho 3-chome Chuo-ku Kobe-shi, Hyogo 651-0072 (JP)
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Respondent: (Opponent)	Compagnie Générale des Etablissements Michelin 23 place des Carmes-Déchaux 63000 Clermont-Ferrand (FR)
Representative:	Le Cam, Véronique Marie Christine Manufacture Française des Pneumatiques Michelin CBS/CORP/J/PI - F35 - Ladoux 23, place des Carmes-Déchaux 63040 Clermont-Ferrand Cedex 9 (FR)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 20 May 2021 revoking European patent No. 2868697 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	D. Semino
Members:	D. Marquis
	P. Guntz

Summary of Facts and Submissions

I. The appeal lies against the decision of the opposition division revoking European patent No. 2 868 697.

II. Claim 1 as granted reads as follows:

"1. A method of producing a rubber composition for a tire component and a pneumatic tire, comprising:

a step (A) of preparing butadiene by catalysis from at least one biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids;
a step (B) of polymerizing the butadiene prepared in the step (A) to prepare a biomass-derived polybutadiene rubber having a pMC (percent modern carbon) value of 1% or more as determined in conformity with ASTM D6866-10, and having a Tg (glass transition temperature) value of -120°C to -80°C, and
a step (C) of kneading the components of the rubber composition using a rubber kneading device, wherein the rubber composition contains the biomass-derived polybutadiene rubber prepared in step (B) and carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g, and then vulcanizing the mixture; wherein the Tg is measured using an automatic differential scanning calorimeter at a temperature increase rate of 10°C/min in conformity with JIS K7121, and
wherein the N_2SA of carbon black is determined in conformity with JIS K6217-2:2001".

III. The contested decision was based on the granted claims as the main request, auxiliary request 3a submitted during the oral proceedings before the opposition division, auxiliary requests 1a, 1b, 2, 3, 4a-b, 5a-f, 6, 7, 8a-b, 9, 10a-d, 11a-c, 12a-g, 13, 14, 15, 16, 17a-b, 18, 19a-b and 20a-b, submitted with letter dated 20 May 2020 and auxiliary requests 21 and 22 submitted with letter of 29 October 2020, whereby the auxiliary requests were renumbered as auxiliary requests 1 to 45 during the oral proceedings.

IV. The opposition division decided that:

- The method of granted claim 1 did not find a basis in the application as originally filed. In particular, the application as originally filed did not disclose i) the use of butadiene as a biomass-derived monomer from the precursors defined in granted claim 1 and consequently the preparation of polybutadiene thereof (sections 1.3.1.1 and 1.3.2 of the decision), ii) the closed list of precursors of butadiene containing ethanol, alkenes and unsaturated carboxylic acids (section 1.3.1.2 of the decision), iii) the preparation of butadiene by catalysis (section 1.3.1.3 of the decision) and iv) the specific use of carbon black having a defined range of nitrogen adsorption specific surface area (N_2SA) (section 1.3.3 of the decision).

- Auxiliary request 5 (renumbered auxiliary request 3a) did not contravene Rule 80 EPC and complied with the requirements of Article 84 EPC. The method of claims 1-3 of auxiliary request 5 however did not find a basis in the application as originally filed because the objection ii) against the main request also partially applied to auxiliary request

5. Reference was also made to objection iii) against the main request. In addition, v) there was no basis for the use of silica in combination with carbon black as filler in the application as originally filed.

- Auxiliary requests 1-4 and 6-45 were not late filed and did not contravene Rule 80 EPC. The requirements of Article 123(2) EPC were however not met as one or more of objections ii), iv) and v) applied to claim 1 of all these requests.

V. The patent proprietor (appellant) lodged an appeal against the decision of the opposition division.

VI. The parties were summoned to oral proceedings and a communication pursuant to Article 15(1) RPBA 2020 indicating specific issues to be discussed at the oral proceedings was sent to the parties.

VII. Oral proceedings were held on 4 July 2022 in the presence of both parties.

VIII. Final requests of the parties:

(a) The appellant requested that the decision under appeal be set aside and that the opposition be rejected or, in the alternative, that the patent be maintained on the basis of one of 45 auxiliary requests, filed during opposition proceedings as auxiliary requests 1a, 1b, 2, 3, 3a, 4a, 4b, 5a, 5b, 5c, 5d, 5e, 5f, 6, 7, 8a, 8b, 9, 10a, 10b, 10c, 10d, 11a, 11b, 11c, 12a, 12b, 12c, 12d, 12e, 12f, 12g, 13, 14, 15, 16, 17a, 17b, 18, 19a, 19b, 20a, 20b, 21 and 22, whereby auxiliary request 3a was filed during the oral proceedings before the

opposition division (and referred to as auxiliary request 5 in the decision under appeal), auxiliary requests 21 and 22 were filed with letter dated 29 October 2020 and all other auxiliary requests were filed with letter dated 20 May 2020.

(b) The respondent (opponent) requested that the appeal be dismissed or that the case be remitted to the department of first instance for further prosecution and that none of the auxiliary requests be admitted into the proceedings.

IX. Claim 1 of auxiliary request 19a differs from claim 1 as granted in that the method is said to comprise "a step of producing biomass-derived ethanol from biomass resources by fermentation using microorganisms, wherein the biomass resource is sugar cane or glucose" and in that step (A) is limited to such a biomass-derived ethanol.

Claim 1 of auxiliary request 19b differs from claim 1 of auxiliary request 19a in that the microorganism is limited to yeast.

Claim 1 of auxiliary request 22 corresponds to claim 1 of the main request in which the biomass-derived polybutadiene rubber in step (B) has "a cis content of 70% by mass or more, a weight average molecular weight (Mw)/number average molecular weight (Mn) ratio of 1 to 10" and in step (C) the rubber contains "the biomass-derived polybutadiene rubber prepared in step (B) in an amount of 20% by mass or more and 80% by mass or less based on 100% by mass of the rubber component, natural rubber in an amount of 20% by mass or more and 80% by mass or less based on 100% by mass of the rubber component, fillers in an amount of 10 to 200 parts by

mass per 100 parts by mass of the rubber, among the fillers silica having a nitrogen adsorption specific surface area of 50 to 250 m^2/g in an amount of 5 parts by mass or more per 100 parts by mass of the rubber, and among the fillers carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g in an amount of 5 to 100 parts mass per 100 parts by mass of the rubber" with the following further addition at then end of the claim "wherein the cis content is measured using an NMR device AV400 with data analysis software TOP SPIN 2.1,
wherein the molecular weight ratio MW/Mn of the polymers is calculated from Mw and Mn values measured by gel permeation chromatography (GPC) in the following conditions (1) to (8)
(l) Device: HLC-8020 from TOSOH CORP.
(2) Separation column: two GMH-XL columns in series from TOSOH CORP.
(3) Measurement temperature: 40°C
(4) Carrier: tetrahydrofuran
(5) Flow rate: 0.6 mL/min.
(6) Injection amount: 5 µL
(7) Detector: differential refractometer
(8) Molecular weight standards: polystyrene standards".

The details of the amendments in the further auxiliary requests are not relevant for the current decision.

X. The appellant's arguments, in so far as they are pertinent, may be derived from the reasons for the decision below. They are essentially as follows:

(a) The oral proceedings should be adjourned as the appellant could not be prepared for a video conference in the best possible way.

(b) Several questions pertaining to the requirements to be applied with regard to Article 123(2) EPC and in particular relating to the combination of several features disclosed in the application as filed should be referred to the Enlarged Board of Appeal.

(c) Claim 1 as granted found a basis in the application as filed, in particular, there was a pointer as to the combination of features relating to steps (A) and (C) defined in the claim.

(d) There was no legal basis not to admit the auxiliary requests into the proceedings.

(e) Claim 1 of auxiliary requests 1a-18, 20a, 20b and 21 met the requirements of Article 123(2) EPC for the same reasons as claim 1 as granted.

(f) The amendments performed in the features defining steps (A) and (C) in claim 1 of auxiliary requests 19a and 19b fulfilled the requirements of Article 123(2) EPC.

(g) Claim 1 of auxiliary request 22 fulfilled the requirements of Article 123(2) EPC especially since the fillers in step (C) were defined in accordance with the application as filed.

XI. The respondent's arguments, in so far as they are pertinent, may be derived from the reasons for the decision below. They are essentially as follows:

(a) There was no reason to adjourn the oral proceedings.

(b) The questions that the appellant wished to be referred to the Enlarged Board of Appeal had

already been addressed by the relevant Case Law of the Boards of Appeal. The referral was left to the discretion of the Board.

(c) Claim 1 of the main request had no basis in the application as filed.

(d) The auxiliary requests should not be admitted into the proceedings.

(e) Claim 1 of auxiliary requests 1a-18, 20a, 20b and 21 did not meet the requirements of Article 123(2) EPC for the same reasons as claim 1 as granted.

(f) The amendments performed in the features defining steps (A) and (C) in claim 1 of auxiliary requests 19a and 19b did not meet the requirements of Article 123(2) EPC.

(g) Claim 1 of auxiliary request 22 had no basis in the application as filed.

Reasons for the Decision

1. Decision not to adjourn the oral proceedings

1.1 Having been informed by the respondent in the afternoon of 1 July 2022 that one of their representatives was not able to attend oral proceedings to be held in person in Munich on 4 July 2022 due to COVID-related travel restrictions and having taken into account both the subject matter to be discussed during oral proceedings and the fact that despite point 11.4 of the Board's communication dated 19 May 2022 no party had invoked any reasons speaking to the contrary, the Board

decided to hold oral proceedings via videoconference.

1.2 The appellant, having indicated their lack of consent to the Board in the morning of 4 July 2022, requested adjournment of the oral proceedings. The issue was discussed with the parties at the beginning of the oral proceedings held via videoconference in the afternoon of 4 July 2022.

1.3 The Board did not accede to the appellant's request and decided to continue the oral proceedings for the following reasons:

1.3.1 Despite the Enlarged Board's finding that in-person oral proceedings are the optimum format to ensure a party's right to be heard (see G 1/21, Reasons 38), the Enlarged Board has acceded that such right can also be respected by holding oral proceedings via videoconference (see G 1/21, Reasons 40-43). Since one of the respondent's representatives who had prepared the case was not in a position to attend the initially planned in-person hearing, the Board had to decide between changing the format to a videoconference or to adjourn oral proceedings for several months. Since the subject to be discussed at the oral proceedings only consisted of arguments concerning Article 123(2) EPC and none of the parties had invoked reasons speaking against such format, the Board had decided to hold oral proceedings via videoconference.

1.4 The appellant's arguments for denying consent thereto and for requesting adjournment of the oral proceedings did not suffice to convince the Board for the following reasons:

- Both parties were informed of the change of format at the same time. Thus, both parties had the same amount of time to prepare for this format and no inequality of arms can be acknowledged.

- The fact that, for technical reasons, it was not possible for the two representatives of the appellant to sit in the same room, was taken into account by the Board by giving a guarantee that the proceedings could be interrupted at any time should one of the representatives feel a need to discuss any issue with his colleague.

- The fact that an employee of the appellant was prevented from attending the hearing was no longer an issue during the oral proceedings, since this was explained by personal reasons not interlinked with the change of format of the proceedings.

- Finally, the possibility to attend oral proceedings was safeguarded also for any member of the public not having checked the register between Friday and Monday by means of a notice displayed in the Isar Building indicating that the scheduled oral proceedings had been moved to Haar. A room was foreseen there for the public to be able to follow the proceedings via videoconference.

1.5 Thus, taking into account all relevant arguments, the Board decided not to adjourn oral proceedings and to discuss the case in substance on the same day.

2. Decision not to refer any questions to the Enlarged Board of Appeal (Article 112(1)(a) EPC)

2.1 The appellant requested several questions to be referred to the Enlarged Board of Appeal:

1. Can there be a violation of Article 123(2) EPC if several features disclosed merely in the description per se are combined in one claim?

If the answer to question 1 is "yes" or "yes" under certain circumstances:

2. Can a combination of features from the description that have been combined in a claim be considered to be originally disclosed, provided that there is a pointer towards the combination of those features?

If the answer to question 2 is "yes" or "yes" under certain circumstances:

3. Is it sufficient for such a pointer when the features included in the claim are described in general terms as "preferred"?

4. Is it sufficient for such a pointer when the features included in the claim are described as being particularly suitable for achieving the same or a mutually similar technical effect?

5. Is it sufficient for such a pointer when the features included in the claim are described as being particularly suitable for solving the originally disclosed task or at least part thereof?

6. Is it sufficient for such a pointer when the features included in the claim are combined in an embodiment/example, together with other features not included in the claim?

2.2 Under Article 112(1)(a) EPC a board of appeal shall refer a question to the Enlarged Board of Appeal if it considers that a decision is required, "in order to ensure uniform application of the law" or because a "point of law of fundamental importance" arises.

2.3 The Board did not accede to this request, since a decision of the Enlarged Board neither seemed required to ensure uniform application of the law nor a point of law of fundamental importance arose. The Board was perfectly able to decide the case without such guidance.

2.4 Furthermore, while there is no doubt that question one is to be answered in the affirmative, questions 2 to 6

are highly case dependent and can only be answered in the context of the overall disclosure of an application which is taken as the alleged support for the combination of features in a claim. The questions, thus, may not be answered in a general and universally binding manner. Rather, a plurality of aspects mentioned in the proposed referral questions is to be taken into account, weighed and applied to the case at hand. The Board has done so and has come to the result set out below. A referral of the proposed questions to the Enlarged Board of Appeal was neither necessary to come to this result nor to reach the purposes of either a uniform application of the law or a clarification of a point of law of fundamental importance. To the contrary, such referral would have significantly lengthened the proceedings without the expectation to receive universal and generalizable answers to the questions submitted by the appellant.

3. Main request (claims as granted) - Added matter

3.1 Granted claim 1 concerns a method comprising three steps (A)-(C) for producing a rubber composition for a tire component and a pneumatic tire. Step (A) concerns the preparation of butadiene by catalysis from at least one biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids. That butadiene is polymerized in step (B) followed by step (C) whereby the components of the rubber composition are kneaded using a rubber kneading device, wherein the rubber composition contains the biomass-derived polybutadiene rubber prepared in step (B) and carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g, and then the mixture is vulcanized.

3.2 According to Article 123(2) EPC, the European patent application or the European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed. The question in the present case was whether the application as originally filed provided a basis for combinations of features which were otherwise individually disclosed throughout the description and claims.

3.3 In that regard, the content of an application must not be considered to be a reservoir from which features pertaining to separate embodiments of the application could be combined in order to artificially create a particular embodiment (Case Law of the Boards of Appeal, 9th Edition 2019, II.E.1.6.1). This means that passages of the application as originally filed, even if they refer to preferred features, cannot be combined at will if the combination is not directly and unambiguously derivable from the application as originally filed.

3.4 Granted claim 1 pertains to a method of producing a rubber composition for a tire component and a pneumatic tire. The basis provided by the appellant for the method including its kneading and vulcanization steps is paragraph 130 of the application as filed, as no such method was included in the claims as originally filed. The Board finds that the method disclosed in that paragraph, because it is described in a generic form, applies to the biomass-derived rubbers of the application as filed as a whole and thus in particular to the biomass-derived rubbers defined in original claim 1 by means of specific parameters (percent modern carbon pMC and glass transition temperature Tg)

included in step (B) of granted claim 1.

3.5 In order to arrive to the subject matter of granted claim 1 including steps (A) and (C) however, further selections have to be performed in the application as filed with regard to both steps.

3.6 As to step (A), granted claim 1 sets out that it involves the preparation of butadiene by catalysis from at least one biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids.

3.6.1 The basis given in the application as filed for step (A) was in claims 1 to 15 also corresponding to paragraphs 9-23. Paragraphs 9-23 describe the preparation of a rubber composition for tires comprising a biomass derived rubber having the properties of pMC and Tg as defined in original and granted claim 1. The biomass derived rubber is obtained by polymerizing a biomass-derived monomer component which is preferably at least one selected from the group consisting of butadiene, myrcene, ocimene, and cosmene (paragraph 10). That passage sets out that butadiene is one of the preferred monomers that can be used but it indicates that other monomers can also be used. This is confirmed in paragraph 11 which does not limit dienes to the list of paragraph 10.

3.6.2 Paragraph 13 discloses then in the same context that preferably the biomass derived rubber "is obtained by polymerizing a diene prepared by catalytic reaction from at least one biomass-derived ingredient selected from the group consisting of biomass-derived alkyl alcohols, allyl alcohols, alkenes, aldehydes, and

unsaturated carboxylic acids".

3.6.3 In order to arrive at step (A) of granted claim 1, therefore, the selection of butadiene as a specific diene obtained by catalysis of selected biomass-derived ingredients was made (ethanol as one of the alkyl alcohols of paragraph 14 as well as alkenes and unsaturated carboxylic acids in the longer list of ingredients disclosed in paragraph 13). While that possibility is disclosed among the possible options of step (A), this is clearly one of several possibilities and therefore amounts to a selection with the disclosure of the application as filed.

3.6.4 Paragraphs 80/89 and 106/107 of the application as filed, which were also cited by the appellant, do not point specifically to that selection since it is apparent from paragraph 80 that the passage is limited to a butadiene prepared by a different route, namely "from a biomass resource using at least one selected from the group consisting of microorganisms, plants, animals, and tissue cultures thereof" which is not part of the definition of step (A) in granted claim 1. As to paragraphs 106/107, the mention of "butadiene that is obtained from a biomass resource by any of the aforementioned methods" appears to refer to the passage starting on paragraph 80 and ending on paragraph 105 and it cannot be directly and unambiguously derived therefrom that it refers to the method of paragraph 13.

3.7 As to step (C), granted claim 1 sets out that it involves kneading the rubber composition containing the biomass-derived polybutadiene rubber prepared in step (B) and carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g.

3.7.1 The incorporation of a filler in the rubber composition is addressed in paragraphs 121-129 of the application as filed. In particular, paragraph 121 discloses that the filler can be anyone known in tires such as "silica, carbon black, aluminum hydroxide, clay, calcium carbonate, montmorillonite, cellulose, glass balloons, and various staple fibers". Silica and carbon black among these fillers are further defined by optional characteristics such as their amounts in the rubber composition (paragraphs 125 and 128) or their nitrogen adsorption specific surface area (N_2SA) (paragraphs 124 and 127).

3.7.2 Step (C) as defined in granted claim 1 by the presence of carbon black having a nitrogen adsorption specific surface area (N_2SA) of 50 to 180 m^2/g therefore constitutes a further selection within the disclosure of the application as filed. Again here while the use of the specific carbon black is disclosed among the possible options of step (C), this is clearly one of several possibilities and therefore amounts to a further selection with the disclosure of the application as filed.

3.8 There is in the application as filed no basis for the specific combination of the selections regarding step (A) and step (C) as they are defined in claim 1 of the main request. In particular, the passages relating to these steps are not explicitly linked to one another in the application as filed.

3.9 The appellant however submitted that the application as filed contained pointers towards the combination of the selections performed in claim 1 of the main request. In particular, one pointer was one of the objectives of the application as filed which was to provide rubber

compositions for tires capable of providing tire components and pneumatic tires having low temperature properties and abrasion resistance (paragraph 8). That pointer was present throughout the application as filed which established a link between the selection of biomass-derived butadiene (paragraphs 53, 54 and 69) and the use of carbon black having a nitrogen adsorption specific surface area (N_2SA) of 50 to 180 m^2/g (paragraphs 126 and 127).

3.10 An objective set out in the application as filed can indeed constitute a pointer justifying a combination of specific features disclosed in separate instances of the description. In the present case, however, the low temperature properties and abrasion resistance seen as a pointer by the appellant is not linked to the selection made with regard to the preparation of the butadiene defined in step (A). In that regard, the pointer advanced by the appellant does not justify why the butadiene of step (A) had to be prepared "by catalysis from at least one biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids".

3.11 Besides, the application as filed contains other features of the rubber composition, i.e. the butadiene content in the biomass-derived rubber (paragraph 70), the biomass-derived rubber content in the rubber component (paragraph 118) and the amount of carbon black (paragraph 128) that are also linked to low temperature properties and abrasion resistance in the application as filed but which were not included in claim 1 of the main request. In that respect, the application as filed does not contain a reason as to why specifically butadiene and carbon black having a nitrogen adsorption specific surface area (N_2SA) of 50

to 180 m^2/g have been selected to define the subject matter of claim 1 of the main request while the other features linked by the same pointer were not. The Board thus finds that low temperature properties and abrasion resistance are not a valid pointer towards the selections made within the application as filed with regard to steps (A) and (C) as defined in claim 1 of the main request.

3.12 The appellant also considered example 1 as a pointer towards the combination of features of granted claim 1. Example 1 of the application as filed can however not form a legitimate basis for the whole of granted claim 1. In particular, example 1 describes a specific method containing elements and steps that are not part of granted claim 1 (presence of sulfur and vulcanization accelerators, combination of silica and carbon black, press-vulcanization) and discloses discrete values of properties (pMC, Tg of the polybutadiene, nitrogen adsorption surface area of the carbon black). The Board does not see in the application as filed a justification for the intermediate generalisation of these specific elements, steps and values of properties to the method as defined in granted claim 1. There is therefore no pointer for the combination of a butadiene obtained by catalysis of a biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids (step (A)) with carbon black having a nitrogen adsorption specific surface area (N_2SA) of 50 to 180 m^2/g (as used in step (C)).

4. The Board concludes that claim 1 of the main request does not meet the requirements of Article 123(2) EPC.

5. Admittance of auxiliary requests

5.1 The respondent contested the admittance of all auxiliary requests into the proceedings.

5.2 The decision of the opposition division concerned renumbered auxiliary request 5 corresponding to auxiliary request 3a submitted during the oral proceedings before the opposition division and renumbered auxiliary requests 1-4 and 6-45 corresponding to auxiliary requests 1a, 1b, 2, 3, 4a, 4b, 5a, 5b, 5c, 5d, 5e, 5f, 6, 7, 8a, 8b, 9, 10a, 10b, 10c, 10d, 11a, 11b, 11c, 12a, 12b, 12c, 12d, 12e, 12f, 12g, 13, 14, 15, 16, 17a, 17b, 18, 19a, 19b, 20a and 20b submitted with letter of 20 May 2020 and auxiliary requests 21 and 22 submitted with letter of 29 October 2020 (section 11 on page 5 of the decision). The opposition division already decided to admit these requests into the opposition proceedings and decided on them coming to the conclusion that they did not meet the requirements of Article 123(2) EPC (section 3 and 4 of the reasons of the decision).

5.3 In that regard these auxiliary requests are part of the decision under appeal and they form the basis for the appeal proceedings according to Article 12(1) to (3) RPBA 2020. There is no legal basis for the Board to exclude the auxiliary requests from the appeal proceedings. The appellant did not contest the opposition division's decision to admit the auxiliary request during first instance proceedings, i.e. to consider them in the decision under appeal. The appellant only requested not to admit them into the appeal proceedings which request, however, lacks a legal basis and must be rejected by the Board.

5.4 All auxiliary requests are therefore in the proceedings.

6. Auxiliary requests 1a-18, 20a, 20b and 21 - Added matter

6.1 Asked by the Board during the oral proceedings which of the auxiliary requests might overcome the objections under Article 123(2) EPC and to which of the auxiliary requests different arguments applied in comparison with the ones discussed with regard to the main request, the appellant confirmed that no different arguments applied to auxiliary requests 1a-18, 20a, 20b and 21 compared to the ones presented for the main request and defended with additional arguments only auxiliary requests 19a, 19b and 22. Under such circumstances the Board can only come to the conclusion that claim 1 of auxiliary requests 1a, 1b, 2, 3, 3a, 4a, 4b, 5a, 5b, 5c, 5d, 5e, 5f, 6, 7, 8a, 8b, 9, 10a, 10b, 10c, 10d, 11a, 11b, 11c, 12a, 12b, 12c, 12d, 12e, 12f, 12g, 13, 14, 15, 16, 17a, 17b, 18, 20a, 20b and 21 does not meet the requirements of Article 123(2) EPC at least for the same reasons as outlined for claim 1 of the main request above.

7. Auxiliary request 19a and 19b - Added matter

7.1 Claim 1 of auxiliary requests 19a and 19b corresponds to claim 1 of the main request with the addition of a preliminary step of producing biomass-derived ethanol from biomass resources by fermentation using microorganisms, the limitation of step (A) to the preparation of butadiene by catalysis from such a biomass-derived ethanol and the further limitation of the biomass resource to sugar cane or glucose (auxiliary requests 19a and 19b) and of the

microorganism is yeast (auxiliary request 19b only).

7.2 The appellant argued at the oral proceedings before the Board that the amendments performed in claim 1 of auxiliary requests 19a and 19b were based on paragraphs 80 and 83 of the application as filed and formed a more literal basis for the definition of the butadiene being prepared by catalysis from biomass-derived ethanol. It is, however, apparent that these amendments do not address the objection of lack of basis of the combination of selections defining steps (A) and (C) as set out above for claim 1 of the main request. In particular, the combination of step (A) as defined in claim 1 of auxiliary requests 19a and 19b (which is still one of several options disclosed in the application as filed) and the use of carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g does not find a basis in the passage cited by the appellant.

7.3 The low temperature properties and abrasion resistance are also not linked to the introduced limitation of the butadiene being prepared from ethanol produced by fermentation using sugar cane or glucose as biomass resource and yeast as microorganism. In that regard, the Board does not find a pointer towards the combination of steps (A) and (C) as defined in claims 1 of auxiliary requests 19a and 19b. Claim 1 of auxiliary requests 19a and 19b therefore does not meet the requirements of Article 123(2) EPC.

8. Auxiliary request 22 - Added matter

8.1 Claim 1 of auxiliary request 22 pertains to a method of producing a rubber composition for a tire component and a pneumatic tire that corresponds to claim 1 of the

main request. A basis for that general method is in paragraph 130 of the application as filed as established in point 3.5 of the present decision.

8.2 As also established in points 3.7.1 to 3.7.3 above, the description also provides a basis for the use of butadiene prepared by "catalysis from at least one biomass-derived ingredient selected from the group consisting of biomass-derived ethanol, alkenes, and unsaturated carboxylic acids" in paragraphs 9-23 of the application as filed, one selection having to be performed in order to arrive at the formulation of step (A) of claim 1 of auxiliary request 22.

8.3 In addition to the limitations in claim 1 of the main request, claim 1 of auxiliary request 22 contains the following amendments:

(i) in step (B) the biomass-derived polybutadiene rubber has "a cis content of 70% by mass or more", and

(ii) "a weight average molecular weight (Mw)/ number average molecular weight (Mn) ratio of 1 to 10",

(iii) the rubber composition contains "the biomass-derived polybutadiene rubber prepared in step (B) in an amount of 20% by mass or more and 80% by mass or less based on 100% by mass of the rubber component",

(iv) "natural rubber in an amount of 20% by mass or more and 80% by mass or less based on 100% by mass of the rubber component"

(v) "fillers in an amount of 10 to 200 parts by mass per 100 parts by mass of the rubber",

(vi) "among the fillers silica having a nitrogen adsorption specific surface area of 50 to 250 m^2/g in an amount of 5 parts by mass or more per 100 parts by mass of the rubber", and

(vii) "among the fillers carbon black having a nitrogen adsorption specific surface area of 50 to 180 m^2/g in an amount of 5 to 100 parts by mass per 100 parts by mass of the rubber",

(viii) "wherein the cis content is measured using an NMR device AV400 with data analysis software TOP SPIN 2.1,
wherein the molecular weight ratio MW/Mn of the polymers is calculated from Mw and Mn values measured by gel permeation chromatography (GPC) in the following conditions (1) to (8)
(1) Device: HLC-8020 from TOSOH CORP.
(2) Separation column: two GMH-XL columns in series from TOSOH CORP.
(3) Measurement temperature: 40°C
(4) Carrier: tetrahydrofuran
(5) Flow rate: 0.6 mL/min.
(6) Injection amount: 5 µL
(7) Detector: differential refractometer
(8) Molecular weight standards: polystyrene standards."

8.4 These features find an individual basis in the application as filed in paragraphs 55 ((i) cis content

of the biomass-derived polybutadiene rubber), 56 ((ii) ratio Mw/Mn), 118 ((iii) biomass-derived rubber content), 119/120 ((iv) presence of natural rubber and its content), 122 ((v) amount of filler), 124/125 ((vi) presence of silica with a nitrogen adsorption specific surface area and its content), 126/128 ((vii) presence of carbon black with a nitrogen adsorption specific surface area and its content) and 140 ((viii) measurement conditions). It is apparent from their individual basis in the description that these features are all linked by a pointer being the provision of a rubber composition having abrasion resistance and flex fatigue resistance, properties which relate to the problem addressed in the application as filed (paragraph 41). In particular all the features indicated in the description to address that problem are now included in claim 1 at their broadest level of generality. That is the case also for the filler which now includes both preferred fillers with their quantities and their nitrogen adsorption specific surface area at their broadest level of generality, which cannot longer be considered as a selection within the disclosure of the fillers. The limitations now inserted reduce therefore the scope of protection to the core of the invention as disclosed in the application as originally filed with one single selection as indicated above. In view of that, the combination of features in claim 1 of auxiliary request 22 does not infringe the requirements of Article 123(2) EPC.

8.5 Claim 1 of auxiliary request 22 is further defined by a list of methods for the determination of the additional properties forming part of that claim. These methods are defined in paragraphs 138 and 140 of the application as filed. As to the methods for the

determination of the glass transition temperature Tg (JIS K7121) and the nitrogen adsorption specific surface area (JIS K6217-2:2001) that were already part of granted claim 1, these are disclosed in paragraphs 139 and 127 respectively of the application as filed.

8.6 Claim 1 of auxiliary request 22 therefore only contains one selection with respect to the definition of step (A), the combination of features in claim 1 otherwise finding a basis in the application as filed. Claim 1 of auxiliary request 22 meets therefore the requirements of Article 123(2) EPC.

9. Remittal

9.1 The respondent requested a remittal of the case to the department of first instance for further prosecution should any of the requests on file be found to meet the requirements of Article 123(2) EPC (reply to the statement of grounds of appeal, page 1). The appellant requested that the case not be remitted.

9.2 It is apparent from the notice of opposition that revocation of the patent was requested also on the grounds under Article 100(a) EPC (lack of novelty and lack of inventive step). These grounds have not been addressed at all in the decision under appeal. Considering that the primary object of the appeal proceedings is to review the decision under appeal (as now explicitly stated in Article 12(2) RPBA 2020), the Board considers that the circumstances of the present case amount to special reasons pursuant to Article 11 RPBA 2020. In addition, the remittal appears to be also justified in order to allow both parties to consider an objection under Article 84 EPC against claim 1 of auxiliary request 22 on the grounds that it did not

define the method for the determination of the nitrogen adsorption specific surface area of silica. That objection was raised by the respondent on the day of the oral proceedings before the Board and its admittance into the proceedings was contested by the appellant.

9.3 Accordingly, exercising its discretion under Article 111(1), second sentence, EPC, the board remits the case to the department of first instance for further prosecution on the basis of auxiliary request 22 as submitted with the letter dated 29 October 2020.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution on the basis of auxiliary request 22 as submitted with the letter dated 29 October 2020.

The Registrar: The Chairman:

B. ter Heijden D. Semino

Decision electronically authenticated