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**Datasheet for the decision
of 23 October 2020**

Case Number: T 2490/17 - 3.3.03

Application Number: 10702996.9

Publication Number: 2389414

IPC: C08L69/00, C08L55/02

Language of the proceedings: EN

Title of invention:
POLYCARBONATE MOLDING COMPOSITIONS

Patent Proprietor:
Covestro Deutschland AG

Opponent:
Techno-UMG Co., Ltd.

Relevant legal provisions:
EPC Art. 54, 56
RPBA 2020 Art. 13(2), 12(2)

Keyword:
Novelty - (yes)
Admittance of experimental report - (yes)
Inventive step - (no) Main request and auxiliary requests 1 to 4
Admittance of auxiliary requests 5 and 6 - (no)



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Case Number: T 2490/17 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 23 October 2020

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
13 October 2017 concerning maintenance of the
European Patent No. 2389414 in amended form.**

Composition of the Board:

Chairman D. Semino
Members: D. Marquis
C. Brandt

Summary of Facts and Submissions

- I. The appeal lies against the decision of the opposition division posted on 13 October 2017 concerning maintenance of European patent No. EP 2 389 414 in amended form on the basis of the claims of the main request filed with letter 14 November 2014 and an amended description.
- II. Claim 1 of the patent in suit read:
- "1. A thermoplastic molding composition comprising
A) 52 to 95 parts by wt., based on the total of A) and B), of aromatic polycarbonate and/or aromatic polyester carbonate and
B) 5 to 48 parts by wt., based on the total of A) and B), of a rubber-modified graft polymer prepared by the bulk, solution or bulk-suspension polymerization process,
lithium in an amount of greater than zero to lesser than or equal to 4 ppm, and
sodium and/or potassium in an individual amount of greater than 1.5 ppm".
- III. An opposition was filed against the patent on the grounds of Article 100(a) EPC (lack of novelty and lack of inventive step) and Article 100(b) EPC.
- IV. The decision of the opposition division was, *inter alia*, based on the following documents:
- OP8': Experimental report of experiments conducted by Mr. Keigo Higaki between 27 March and 4 April 2014 (translation into English)
OP9: WO 2007/009622 A1

OP11: JP-A 2003-138120
OP11": English translation of OP11
OP12: JP-A 2000-186125
OP12": English translation of OP12
OP13: EP 1452564 A1
OP14: WO 91/018052
OP15: WO 99/11713
OP17': Experimental report of experiments conducted by Mr. Keigo Higaki between 16 and 22 February and 25 June and 1 July 2015 (translation into English)

V. Claim 1 of the main request on which the decision was based read as follows:

"1. A thermoplastic molding composition comprising
A) 52 to 95 parts by wt., based on the total of A) and B), of aromatic polycarbonate and/or aromatic polyester carbonate and
B) 5 to 48 parts by wt., based on the total of A) and B), of a rubber-modified graft polymer prepared by the bulk, solution or bulk-suspension polymerization process,
lithium in an amount of greater than zero to lesser than or equal to 4 ppm, and
sodium and/or potassium in an individual amount of greater than 1.5 ppm
with the proviso that both the sodium and the potassium contents individually do not exceed 100 ppm."

VI. The contested decision, as far as relevant to the present decision, can be summarized as follows:

- The main request was novel over OP9 because it was not possible to derive the contents of sodium and potassium present in the moulding compositions disclosed in that document. As a result, the

criteria of a selection invention could not apply to that case.

- OP9 was the closest prior art. Claim 1 of the main request differed from OP9 in that the contents of sodium and/or potassium were individually more than 1.5 ppm and both the sodium and potassium content were individually at most 100 ppm, whereas in OP9 the contents of sodium and potassium in the moulding composition were not defined. The patent in suit showed in Table 1 (example 8) that impact-modified polycarbonate compositions comprising the claimed range of sodium and potassium had superior hydrolysis resistance (i.e. lower MVR change) in comparison to compositions according to OP9 (Table 2, example 4). It was also shown that the hydrolysis resistance of the impact-modified polycarbonate compositions was surprisingly better when the content of sodium or potassium was inside the claimed range than when it was outside (examples 2 and 3 versus examples V1 and 4; example 5 versus examples V1 and 6). It followed that the objective technical problem was the provision of impact-modified polycarbonate compositions having improved hydrolysis resistance. OP9, OP11", OP12" and OP13-OP15 addressed the hydrolytic resistance of polycarbonate compositions but none of these documents suggested that the hydrolytic resistance of impact-modified polycarbonate compositions could be improved by a specific amount of sodium and/or potassium in the presence of a define amount of lithium. The main request therefore involved an inventive step.

VII. The opponent (appellant) filed an appeal against the decision of the opposition division. Document OP20

(Experimental report of experiments conducted by Mr. Keigo Higaki between 27 December 2017 and 8 February 2018) und OP19 (Wei Xie, Geoffrey M. Geise, Benny D. Freeman, Chang Hyun Lee, James E. McGrath, Influence of processing history on water and salt transport properties of disulfonated polysulfone random copolymers, Polymer, Volume 53, Issue 7, 2012, Pages 1581-1592) were filed by the appellant with the statement of grounds of appeal.

VIII. The patent proprietor (respondent) filed, with their reply to the statement setting out the grounds of appeal, six sets of claims as auxiliary requests 1 to 6.

Claim 1 of auxiliary request 1 differed from claim 1 of the main request in that the individual maximum amounts of sodium and potassium in the composition were limited to 50 ppm.

Claim 1 of auxiliary request 2 differed from claim 1 of the main request in that the individual maximum amounts of sodium and potassium in the composition were limited to 20 ppm.

Claim 1 of auxiliary request 3 differed from claim 1 of the main request in that the lithium content of the molding composition was limited to 0.3 to 3.2 ppm, the sodium and/or potassium contents of the molding compositions individually exceeded 2 ppm and both the sodium and the potassium contents individually did not exceed 10 ppm.

Claim 1 of auxiliary request 4 differed from claim 1 of auxiliary request 3 in that the solution polymerization

was deleted from the list of methods of preparing the rubber-modified graft polymer B.

Claim 1 of auxiliary request 5 differed from claim 1 of auxiliary request 3 in that the rubber-modified graft polymer B comprised:

"B.1 65 to 95 wt.%, based on B), of the polymerized product of a mixture of

B.1.1 50 to 99 wt.%, based on B.1), of at least one member selected from the group consisting of vinylaromatics and vinylaromatics substituted on the nucleus and

B.1.2 1 to 50 wt.%, based on B.1), of at least one member selected from the group consisting of vinyl cyanides, (meth)acrylic acid (C₁-C₈)alkyl esters and derivatives of unsaturated carboxylic acids grafted on

B.2 5 to 35 wt.%, based on B), of one or more graft bases having a glass transition temperature of <-10 °C, wherein B.2) is at least one member selected from the group consisting of polybutadiene rubber, and polybutadiene/styrene rubber".

Claim 1 of auxiliary request 6 differed from claim 1 of auxiliary request 5 in that the lower limit of the content in potassium was deleted.

- IX. The parties were summoned to oral proceedings. Issues to be discussed at the oral proceedings were then specified by the Board in a communication dated 30 April 2020.

- X. Oral proceedings were held on 23 October 2020, the appellant being present on the EPO premises and the respondent being connected remotely by videoconference.

XI. The appellant's arguments, insofar as relevant to the decision, may be summarized as follows:

Main request

Novelty over OP9

- Table 2 of OP9 disclosed thermoplastic molding compositions comprising components A and B according to claim 1 of the main request. The lithium content of the compositions was disclosed in Table 2, while the sodium and potassium contents of the rubber components B-1 to B-7 were disclosed in Table 1 of OP9. These rubber components B-1 to B-7 were used in an amount of 40 parts by weight to manufacture polycarbonate based compositions as indicated in Table 2. The minimum sodium and potassium contents of the exemplified compositions were derivable from Table 1 in combination with Table 2. For instance, the lithium content of B-5 was 7 ppm (Table 1) and the lithium content of composition 5 (Table 2) using 40 parts by weight of B-5 was 2.8 ppm ($= 7 \text{ ppm} \times 0.4$). Accordingly, it could be derived that composition 1 (Table 2) using 40 parts by weight of B-1 (Table 1) had to contain sodium in a minimum amount of 0.6 ppm and potassium in a minimum amount of 0.8 ppm. Hence, the examples of OP9 provided an explicit disclosure regarding the minimum amounts of sodium and potassium in the moulding composition.

- Also, since the amounts of sodium and/or potassium in claim 1 of the main request were ill-defined, it was impossible to reliably distinguish between the subject-matter of claim 1 and OP9. In particular, OP8' and OP17' showed that amounts of sodium and

potassium measured under different ashing conditions led to a variation of up to 50% of the measured amounts. Since the patent in suit did not contain any information on the ashing conditions that had to be chosen for preparing the sample used in the determination of the sodium and potassium contents in claim 1 of the main request, the limits defining these ranges were subject to variations of up to 50%. As a result, the ranges defining the amounts of sodium and potassium in claim 1 of the main request encompassed the amounts of sodium and potassium in the compositions that could be calculated on the basis of the examples of OP9. Claim 1 lacked therefore novelty over OP9.

- OP9 additionally described that the content of sodium and potassium not only derived from component B (Tables 1 and 2), but also from optional components C, D and E, which contained amounts up to 1500 ppm of these metals. Under the assumption that the optional components C, D and E were present in minor amounts (e.g. 5 mass% of the composition), the resultant maximum content would be 75 ppm ($= 1500 \text{ ppm} \cdot 0.05$). Assuming that components C, D and E were present in amounts of up to 50 mass%, the resultant content would then be theoretically up to 750 ppm. It could thus reasonably be assumed that OP9 covered an amount of sodium and potassium of more than 0.4 ppm (Tables 1 and 2) and up to 750 ppm (by adding additives C, D and E with the explicitly mentioned end point of 1500 ppm). The criteria of selection inventions could therefore be applied to that range. Composition 1 of OP9 contained lithium in an amount of 0.5 ppm, sodium in a minimum amount of 0.6 ppm and potassium in a minimum amount of 0.8 ppm.

Hence, the selected sub-range in claim 1 of the main request, 1.5 ppm to 100 ppm, was not narrow compared to the known range of OP9 and the sodium/potassium amounts (≥ 1.5 ppm) were not sufficiently far removed from the values of composition 1 of OP9, thereby failing to meet criteria (a) and (b) of a selection invention. The claimed sub-range was also an arbitrary selection within the range disclosed in OP9 so that the selected range also did not meet criteria (c) of a selection invention. Also in view of this claim 1 of the main request lacked novelty over OP9.

Admittance of OP20

- OP20 was filed because the contested decision did not discuss the argument that - due to the high possible amounts of sodium and/or potassium - it was ruled out that the desired improved hydrolysis resistance was obtained across the whole scope of the claim, which was already apparent in view of the trends shown in the examples of the opposed patent. In addition, OP20 related to compositions having a very low lithium content, so that these experiments actually also addressed the question of whether hydrolysis resistance was improved at a very low lithium content. For these reasons OP20 should be admitted into the proceedings.

Inventive step

- OP9 was the closest prior art. Considering the amounts in sodium and potassium as distinguishing features over OP9, the data of Table 1 of the patent in suit did not support an improvement in hydrolysis resistance (expressed as MVR change)

over the whole scope of the ranges of sodium and potassium according to claim 1.

- A comparison of the amounts in potassium of Example V1 versus Example 5 of the patent in suit (0.8 ppm versus 2.8 ppm; notably, the sodium amount being 0.8 ppm in both cases) revealed that the MVR change was almost identical (12.8% versus 12.2%), so that essentially no improvement in hydrolysis resistance was associated with an increase of the potassium amount.
- Additionally, the hydrolysis resistance (MVR change) worsened upon further increasing the sodium or the potassium amount to more than 2.8 ppm (cf. examples 2, 3, 4 and examples 5, 6). Hence, since an increase of the amount in potassium to 2.8 ppm (example 5) did not essentially improve hydrolysis resistance, it could be extrapolated that a further increase in the amount in potassium of up to 100 ppm could not lead to improved hydrolysis resistance, but rather to a deteriorated hydrolysis resistance. It was thus not credible that the admissible high individual and total content(s) of sodium and potassium provided an improved hydrolysis resistance across the range defined in claim 1 of the main request.
- Also, the experimental report OP20 provided a reference PC/ABS composition (C1) and a reference PC/AES composition (C2), which differed from claim 1 in the lower sodium and potassium contents (similarly to example V1 in Table 1 of the patent in suit). The determination of the MVR change of examples C1-1 to C1-4 showed that no improvement in hydrolysis resistance was obtained by either

increasing the sodium or the potassium content, even at a relatively high lithium content of 1.1 ppm. Also, the determination of the MVR change of the compositions C2-1 and C2-2 showed that an individual increase of the sodium or especially of the potassium content lead to a higher MVR change (reduced hydrolysis resistance) at very low levels of lithium. OP20 thus reinforced the conclusion that the distinguishing feature over OP9 was not associated with any technical effect.

- The problem was thus the provision of an alternative thermoplastic composition.

- The passage on page 19 (lines 11-15) of OP9 already taught that the resistance to hydrolysis of the exemplified compositions depended on the lithium content of the ABS, but not - or at least not to a comparable extent - on the content of other alkali metal or alkaline earth metal ions, such as sodium, potassium, calcium and magnesium. A skilled reader would thus consider and expect that a hydrolysis resistant polycarbonate composition could be provided by adjusting the content of other alkali metal or alkaline earth metals, such as sodium and potassium, with more flexibility, i.e. at a higher content, compared to the content of lithium.

- OP9 additionally taught that optional additives could be used in moulding compositions and that the content of alkali metal and alkaline earth metal ions of components C, D and E (essentially sodium and potassium) was from 0.1 to 1500 ppm, and particularly preferably up to 500 ppm. A skilled reader would have therefore inevitably arrived at the subject-matter of claim 1 by further

incorporating minor amounts of such optional components C, D and E into the exemplified polycarbonate compositions of OP9.

- Hence, a skilled reader would end up with a polycarbonate composition containing sodium and/or potassium in the range of 1.5 to 100 ppm when aiming at providing an alternative hydrolysis resistant PC composition without any inventive skill.

- Claim 1 was also rendered obvious by OP9 in combination with the other cited prior art documents. In particular, the prior art taught that the alkaline and alkaline earth metal contents were associated with deteriorated properties of impact modified polycarbonate compositions (OP14: page 3, line 30 to page 4, line 13, page 32, lines 16-25) and especially with deteriorated hydrolysis resistance (OP15: page 2, lines 1-6; page 15, 5th paragraph; OP11: paragraphs 4-5 and 29; OP12: paragraphs 32-34; and OP13: paragraphs 1 and 99). In order to attain hydrolysis resistance, the prior art taught the use of alkaline and alkaline earth metal contents of 1 ppm or less (OP15: page 2, lines 1-6, page 6, last paragraph, page 21, lines 1-3), of 5 ppm or less (OP11: claim 1, paragraphs 5 and 29), less than 20 ppm (OP12: paragraph 45), and preferably less than 10 ppm (OP13: paragraph 99). The prior art also taught that hydrolysis resistant polycarbonate compositions were already obtained in the presence of an alkali and alkaline earth metal content of 100 ppm or less (OP12: claim 1, paragraphs 45-46; OP13: paragraph 99).

- There was no prejudice in the prior art against polycarbonate compositions having sodium and/or potassium contents as defined in operative claim 1. A skilled person arrived at operative claim 1 by applying the teaching of OP11-OP14 regarding the amounts of sodium and potassium. Therefore claim 1 of the main request lacked inventive step over OP9 alone or in combination with OP11-OP15.

Auxiliary requests 1 to 4

Inventive step

- The argumentation put forward for the main request also applied to auxiliary requests 1 to 4. Claim 1 of these auxiliary requests thus lacked an inventive step over OP9 alone or in combination with OP11-OP15.

Auxiliary requests 5 and 6

Admittance

- Regarding the amendment in auxiliary request 5, namely the specific definition of rubber component B, the question arose whether this amendment further limited the claimed invention in the direction of the same inventive idea related to the amounts of impurities. The patent was entirely silent about the effect of rubber component B. If the use of a specific rubber component B as defined by claim 1 of auxiliary request 5 solved another technical problem, such technical problem represented a divergent approach which was neither dealt with in the decision, nor in the written submission of the parties. Auxiliary request 5

should therefore not be admitted into the proceedings.

- Further, since the use of rubber as component B and its meaning for the claimed composition had not been discussed in the first instance proceedings, remittal of the case to the department of first instance was requested in case this request were to be admitted into the proceedings.
- The same considerations applied with respect to auxiliary request 6.

XII. The respondent's arguments, insofar as relevant to the decision, may be summarized as follows:

Main request

Novelty over OP9

- The range of sodium and potassium according to claim 1 of the main request was a distinguishing feature over the disclosure of OP9. This feature was not explicitly disclosed in OP9 and could not be derived directly and unambiguously therefrom. As established in the contested decision, the principle of selection inventions did not apply in the present case. For this purpose OP9 would have had to define a broader range for the quantities of sodium and potassium in the moulding composition, which was not the case.
- As to the disclosure in the examples of OP9, the contents of sodium and potassium were only given for component B. Since component A could contain these metals as well, the calculation of the

appellant regarding the amounts of sodium and potassium in the moulding composition based on the quantities of sodium and potassium in component B and the quantity of B in the composition was not conclusive. OP9 thus contained no explicit or implicit disclosure of the quantities of sodium and potassium in the moulding compositions of the examples.

- With regard to the relevance of the principles of selection inventions, preferred amounts of alkali and alkaline earth metals in components C, D and E were disclosed on page 15 of OP9. The range of 0.1-1500 ppm mentioned by the appellant however only corresponded to a preferred embodiment so that the components could contain more than 1500 ppm of sodium and potassium as well. Also, that passage of OP9 concerned all alkaline earth and alkali metals which, in addition to lithium, sodium and potassium, also included other elements such as magnesium, calcium, barium, beryllium and rubidium. Furthermore, components C, D and E were only disclosed as optional components of the composition in OP9. Therefore, in order to come to a specific range of sodium and potassium in OP9 one had to a) first select sodium and potassium specifically from the disclosure on page 15, b) select one of several ranges disclosed for the amounts of metals and c) combine this selection with unknown amounts of the optional components C, D and E. A direct and unambiguous disclosure of a range for the amounts of sodium and potassium in the moulding composition was therefore not derivable from OP9 and the subject-matter of claim 1 of the main request could thus not be considered as a selection within the disclosure of this document.

- Claim 1 of the main request was therefore novel over OP9.

Admittance of OP20

- OP20 was an experimental report that was intended to show that the ranges of sodium and potassium in claim 1 of the main request were not associated with an improvement of the hydrolysis resistance. The related question of inventive step in view of OP9 and in consideration of the examples of the patent in suit had already been addressed in the notice of opposition dating 2014 and in the reply thereto. The filing of an experimental report should have therefore taken place during the first instance proceedings.
- The reasoning in the contested decision did not justify the filing of OP20 in appeal either. The decision was concerned with the presence of an improvement with respect to examples 1 and 2 of OP9. The newly submitted experimental report did not concern that question as no attempts were made to compare examples 1 and 2 of OP9 (having 0.5 and 0.8 ppm lithium) with compositions according to the patent but it contained examples in which the lithium content was different and concerned compositions with a different grafting base. The experimental report therefore concerned other aspects than those set out in the contested decision and could not be considered as filed in direct response thereto.
- For these reasons, OP20 should not be admitted into the proceedings.

Inventive step

- OP9 was in the same technical field as the patent in suit and dealt with the same aim. OP9 was therefore the closest prior art.
- The distinguishing feature of claim 1 of the main request over OP9 was the definition of the amounts in sodium and potassium by way of ranges. More precisely, the individual sodium and/or potassium amounts were greater than 1.5 ppm and at the same time both sodium and potassium contents did not exceed 100 ppm individually. These specific amounts of sodium and potassium resulted in an improved hydrolysis resistance, as shown in Table 1 of the patent in suit.
- In particular, examples 2, 3, 5 and 7 in table 1 and comparative example V1 all contained 1.3 ppm lithium and differed only in their amounts of sodium and potassium. Examples 2 and 3 showed that when the amount of sodium was greater than 1.5 ppm, the change in MVR was low, meaning that the hydrolysis resistance of the composition was improved. The same effect was shown when the potassium content was greater than 1.5 ppm as shown in example 5 or when both sodium and potassium were higher than 1.5 as in example 7. Examples 4 and 6 showed that values of the amounts of sodium (example 4) or potassium (example 6) greater than 100 ppm led to a significant deterioration in hydrolysis resistance of the composition.
- The lower limit for the contents of sodium and potassium of 1.5 ppm was not arbitrary. Indeed it

was a reasonable generalisation of the examples wherein the amounts of sodium and/or potassium was 2.8 ppm in the inventive examples and 0.8 ppm in comparative example V1.

- OP20 did not call into question the technical effect shown in the patent in suit. In particular, besides doubts and systematic errors concerning the correct measurement of the amounts in lithium, sodium and potassium as shown in OP8' and OP17, the values provided in OP20 contradicted the results presented in OP9 and in the patent posing serious doubts about their reliability. The data in Table 1 of OP20 in particular showed 0% MVR change, regardless of the amount of sodium and potassium when lithium was present in an amount of between 1.1 and 1.5 ppm. In this respect, OP20 was in contradiction with OP9 and also with the patent in suit which showed in examples 1-4 that with 1.3 ppm lithium in the composition, a significant change in the MVR value was achieved. The measurements provided in OP20 were thus not conclusive and OP20 therefore did not establish that the distinguishing feature over OP9 had no effect on the hydrolysis resistance.
- The problem was thus to provide polycarbonate compositions with improved hydrolysis resistance.
- OP9 did not point to the range of sodium and/or potassium contents according to claim 1 of the main request in order to improve the hydrolysis resistance of the compositions. On the contrary, OP9 (page 19, lines 10-15) led away from that range because that passage taught that alkali or alkaline earth metals other than lithium did not influence

the hydrolysis resistance to a comparable extent. OP9 only generically taught the reduction of lithium, sodium and potassium contents in order to bring the hydrolysis resistance to a good level.

- By contrast, the patent in suit described the improvement of hydrolysis resistance by the presence of sodium and/or potassium in a minimum quantity of 1.5 ppm (combined with an upper limit of 100 ppm). There was no indication in OP9 that such an amount in alkali improved hydrolysis resistance.
- OP11 taught that the compositions should contain less than 1 ppm sodium and potassium. OP11 therefore taught away from claim 1 of the main request which required a minimum amount of sodium and/or potassium of 1.5 ppm. That document did not taught an effect of sodium and/or potassium on the composition.
- OP12 concerned compositions with preferably less than 20 ppm alkali - or alkaline earth metals. The use of a minimum amount of sodium and/or potassium to improve hydrolysis resistance was not taught in that document.
- OP13 concerned flame retardant polycarbonate compositions containing a styrene resin with an alkali or alkaline earth metal content of preferably less than 10 ppm to improve thermal stability and hydrolysis resistance. OP13 taught a reduction of the amounts in metals and did not indicate that a minimum quantity of 1.5 ppm sodium and/or potassium led to an improvement of the

hydrolysis resistance.

- OP14 would not have been considered since it did not concern hydrolysis resistance as a result of the presence of specific amounts of ionic species.
- OP15 disclosed polycarbonate compositions containing ABS with a low alkali metal content of 1 ppm or less, particularly preferably 0.1 ppm or less. The compositions were characterised by a good hydrolysis resistance. OP15 taught the presence of sodium and potassium in as low an amount as possible. It did not consider the presence of these metals in a minimum quantity in order to achieve a good hydrolysis resistance.
- None of the documents cited in appeal therefore contained any indication that sodium and/or potassium had to be present in an amount of at least 1.5 ppm (combined with an upper limit of 100 ppm) in the polycarbonate composition to provide a good hydrolysis resistance. On the contrary, the skilled person was taught that the amounts in alkali or alkaline earth metals and in particular sodium and potassium had to be reduced as much as possible. The cited documents thus confirmed the existence of a widespread prejudice against the presence of a minimal quantity of alkali metals in order to improve hydrolysis resistance.
- For these reasons claim 1 of the main request was inventive over OP9 alone or in combination with any of OP11 to OP15.

Auxiliary requests 1 to 4

Inventive step

- Claim 1 of auxiliary requests 1 and 2 limited the maximum amounts of sodium and potassium such that OP20 became less relevant to the question of inventive step. Otherwise, the argumentation of inventive step remained the same as that presented for the main request. Claim 1 of these requests was therefore inventive over OP9 alone or in combination with any of OP11 to OP15.

- Claim 1 of auxiliary request 3 and 4 limited even more the amounts of lithium, sodium and potassium in the composition in order to come closer to the inventive examples of the patent in suit. Also, the deletion of the reference to solution polymerization in claim 1 of auxiliary request 4 restricted claim 1 because the production process had an influence on the morphology and structure of the resulting composition. Claim 1 of these requests was thus inventive over OP9 alone or in combination with any of OP11 to OP15.

Auxiliary requests 5 and 6

Admittance

- Claim 1 of auxiliary requests 5 and 6 corresponded to claim 1 of auxiliary request 3 with further amendments to bring claim 1 even closer to the examples of the patent in suit and away from OP20. Claim 1 of auxiliary request 5 was not new to the proceedings as it corresponded to a combination of claims 1, 6 and 9 as granted. Claim 1 of auxiliary

request 6 corresponded to claim 1 of auxiliary request 5 wherein the condition on the minimum amount was limited specifically to sodium. Auxiliary requests 5 and 6 did not therefore change the scope of the proceedings and should be admitted on this basis.

- XIII. The appellant requested that the decision under appeal be set aside and that the patent be revoked. It was also requested to admit documents OP19 and OP20 filed with the statement setting out the grounds of appeal into the proceedings. It was further requested that auxiliary requests 5 and 6 not be admitted into the proceedings. It was also requested that the case be remitted to the opposition division should auxiliary requests 5 and 6 be admitted into the proceedings.
- XIV. The respondent requested that the appeal be dismissed or that the patent be maintained on the basis of any one of the auxiliary requests 1 to 6 filed with the reply to the statement of grounds. It is also requested not to admit documents OP19 and OP20 into the proceedings.

Reasons for the Decision

Main request

1. Novelty over OP9
 - 1.1 Novelty of claim 1 of the main request was contested over document OP9, specifically over the examples disclosed in Table 2 of that document.
 - 1.2 Table 2 on page 20 of OP9 illustrates the molding compositions of examples 1-5 which comprise 60 parts by

weight of a component A being a linear polycarbonate based on bisphenol A (page 17, lines 5 and 6) and 40 parts by weight of one of components B-1 to B-5 being ABS polymers prepared by bulk polymerization of 82 wt.-%, based on the ABS polymer, of a mixture of 23 wt.-% acrylonitrile, 74 wt.-% styrene and 3 wt.-% butyl acrylate in the presence of 18 wt.-%, based on the ABS polymer, of rubbers B-1 to B-5 as described in Table 1 on page 18 dissolved in methyl ethyl ketone (page 17, lines 10 to 16).

- 1.3 The individual components A and B-1 to B-5 of the compositions according to examples 1-5 correspond to components A) and B) defined in operative claim 1 and their amounts in the molding compositions are also according to that claim. The amounts of lithium of the compositions produced in examples 1 to 5 of OP9 vary from 0.5 ppm to 2.8 ppm (Table 2, page 20) and are thus according to operative claim 1. The amounts of sodium and potassium of these compositions are however not disclosed in OP9.
- 1.4 The point of contention with regard to novelty of operative claim 1 was whether the thermoplastic molding compositions of examples 1-5 in OP9 contained sodium and/or potassium in amounts that are within the ranges defined in operative claim 1, that is in amounts that are individually greater than 1.5 ppm with the proviso that both the sodium and the potassium amounts individually do not exceed 100 ppm.
- 1.5 In that respect, the appellant argued that the amounts of sodium and potassium in the thermoplastic molding compositions of OP9 could be derived from the amounts of sodium and potassium disclosed for components B-1 to

B-5 in Table 1 and from the description of OP9.

1.6 The argumentation of the appellant in that regard relied on the amounts of sodium and potassium given for components B-1 to B-5 in Table 1 and on the amounts of alkali metals that could be provided by additives C, D and E (first paragraph, page 15). That argumentation however is incomplete since it does not account for the amount of sodium or potassium in component A, a polymeric component that may contain significant amounts of these metals. Since the amounts in sodium and potassium in component A of the thermoplastic molding compositions of OP9 is unknown and the amounts of metals in component B are also not particularly limited in the general description of OP9 (the third paragraph on page 12 merely discloses preferred ranges), it follows that the total amounts of sodium and potassium in the thermoplastic molding compositions of OP9 cannot be determined. This is valid both for the specific examples in Table 2 and for the general disclosure of the document.

1.7 Also, the lack of data provided in OP9 with respect to the amounts of these metals in component A does not even allow an estimate of their amounts in the compositions by way of ranges. Thus, the ranges in sodium and potassium in the compositions defined in claim 1 of the main request cannot be considered as a selection with regard to a specific broader disclosure in OP9 to which the criteria used to analyse novelty of selection invention should apply. The argument of the appellant regarding the applicability of these criteria does therefore not convince.

1.8 With regard to examples 1-5 of OP9 more specifically, the appellant submitted that the amounts of sodium and

potassium in the thermoplastic molding compositions could be calculated from the amounts of these metals disclosed in Table 1 for components B-1 to B-5 only. The appellant relied on the observation that the amount in lithium in the thermoplastic molding compositions of examples 1-5 was directly proportional to the amount of the same metal in components B-1 to B-5 and that the calculation showed that no other source of lithium was present. That observation however is limited to lithium and it was not established or made plausible that it would equally apply to the amounts of sodium and potassium in the composition. In that regard, it was not made plausible that the amounts of sodium and potassium could be calculated from the data in Table 1 alone.

1.9 Also, the amounts of sodium (0.6 ppm) and potassium (0.8 ppm) in the composition of example 1 that were calculated by the appellant from the amounts of these metals in component B-1 only (fourth paragraph on page 7 of the statement setting out the grounds of appeal) are still below the minimum individual amounts of sodium and potassium defined in claim 1 of the main request (greater than 1.5 ppm). The amounts of sodium and potassium in component A being unknown, it cannot be concluded that the amounts of sodium and potassium provided by both components A and B in the thermoplastic molding compositions of examples 1-5 would individually be greater than 1.5 ppm with the proviso that both the sodium and the potassium amounts individually would not exceed 100 ppm. In that regard, the attack based on the thermoplastic molding compositions of examples 1-5 does not convince.

1.10 The appellant additionally contended that the definition of the amounts of sodium and potassium in

the thermoplastic molding compositions according to operative claim 1 was ambiguous because the conditions for the determination of these amounts were not provided. As a result of that ambiguity, the ranges of amounts of sodium and potassium in operative claim 1 were implicitly broader and would encompass amounts of sodium and potassium down to 0.5 ppm, including the amounts of 0.6 ppm for sodium and 0.8 ppm for potassium calculated for the composition of example 1. That argument of the appellant again does not account for any amount of sodium and potassium in component A present alongside component B-1 in example 1 and that may cause the overall amounts of sodium and potassium to be higher than the maximum amounts defined in operative claim 1 (100 ppm). In view of that, it cannot be concluded that example 1 of OP9 discloses directly and unambiguously a composition according to claim 1 of the main request.

- 1.11 It is apparent from the above that the calculation of the amount of sodium and potassium in the thermoplastic molding compositions provided by the appellant from the data given in the examples of OP9 or from the passages of the general disclosure of OP9 rests on several assumptions. According to established case law however, it is a condition for the acknowledgement of lack of novelty that the claimed subject-matter is "directly and unambiguously derivable from the prior art". In other words, it has to be "beyond doubt - not merely probable - that the claimed subject-matter was directly and unambiguously disclosed in a patent document" (Case Law of the Boards of Appeal, 9th Edition, July 2019, I.C.4.1). Amounts of sodium and potassium in the thermoplastic molding compositions according to operative claim 1 thus cannot be seen as being directly

and unambiguously disclosed in OP9.

1.12 Under these circumstances, the Board concludes that claim 1 of the main request is novel over OP9.

2. Admittance of OP20

2.1 OP20 is an experimental report provided by the appellant with their statement of grounds of appeal. OP20 was used by the appellant in the discussion of inventive step (section 3.2.3 of the statement of grounds of appeal) and was considered relevant to answer the question of whether the improvement in hydrolysis resistance was obtained over the whole scope of operative claim 1 and in particular when low amounts of lithium were present in the thermoplastic molding compositions.

2.2 The respondent contended that OP20 should not be admitted into the proceedings since evidence relating to the question of inventive step should have been filed during the opposition proceedings. The appellant argued that OP20 was filed in reply to the reasoning of the decision of the opposition division with regard to inventive step.

2.3 It is apparent that the experimental report OP20 was filed to reinforce the position of the appellant that an effect could not be acknowledged over the whole scope of the ranges defining the amounts of metals in the composition, so that an improvement of the hydrolysis resistance over OP9 was not present, i.e. the same line of attack as in opposition which had not been found convincing by the opposition division was maintained and no new objection, nor any new attack was introduced by filing the additional data. While the

data could have been filed in opposition, the Board sees no reason to conclude that they should necessarily have been filed then.

- 2.4 OP20 can thus be seen as a legitimate reaction to the decision of the opposition division. The Board therefore sees no reason to consider OP20 inadmissible (Article 12(4) RPBA 2007 which applies by virtue of Article 25(2) RPBA 2020).
- 2.5 While the admittance of OP19, into the proceedings was also requested by the appellant and contested by the respondent, that document was only cited in view of the discussion of sufficiency of disclosure which did not need to be addressed in the present appeal proceedings. A decision on the admittance of OP19 is therefore not necessary.
3. Inventive step
 - 3.1 The patent in suit concerns impact modified thermoplastic molding compositions based on aromatic polycarbonate and/or polyester carbonate and a rubber-modified graft polymer that are resistant to hydrolysis (paragraphs 7 and 9), evaluated by the change in melt volume flow rates (MVR) as determined and calculated by the method disclosed in paragraph 65 of the patent in suit.
 - 3.2 OP9 also concerns thermoplastic molding compositions and in particular impact modified hydrolysis-resistant polycarbonate compositions (page 1, lines 8 and 9) that as a result of their low content in lithium ions have an improved resistance to hydrolysis compared to similar compositions having a relatively high content of lithium ions (page 2, lines 16-22). OP9 was seen as

the document representing the closest prior art in the decision of the opposition division and was also seen as the closest prior art by the parties in appeal. The Board sees no reason to depart from that view.

- 3.3 The part of OP9 that was seen as the most relevant starting point for the assessment of inventive step was the one related to the examples and their compositions as reported in Tables 1 and 2. In particular, the compositions of examples 1-5 of Table 2 comprise 60 wt.-% of a linear polycarbonate component A (page 17, lines 3-6) and 40 wt.-% of ABS polymers and rubber components B-1 to B-5 (page 17, lines 8-15 and Table 1). It is apparent from Table 2 of OP9 that the amounts of lithium in the compositions of examples 1 to 5 (example 1: 0.5 ppm; example 2: 0.8 ppm; example 3: 1.2 ppm; example 4: 2.0 ppm; example 5: 2.8 ppm) are according to claim 1 of the main request ("greater than zero to lesser than or equal to 4 ppm"). The amounts in sodium and potassium of these compositions however are not disclosed in the examples and therefore constitute the distinguishing features for the compositions of claim 1 of the main request over OP9.
- 3.4 The respondent contended that the problem solved by the subject-matter defined in claim 1 of the main request over OP9 was the provision of thermoplastic molding compositions with improved hydrolysis resistance.
- 3.5 The improved hydrolysis resistance resulted, according to the respondent, from the combination of specific ranges defining the amounts of lithium, sodium and potassium in the composition according to claim 1 of the main request. In that regard, it has already been established in section 3.3 above that the examples of OP9, which constitute the most relevant part of that

document in the assessment of inventive step, all contain lithium in an amount that is within the range of claim 1 of the main request. In the case of example 3 in particular, the amount of lithium (1.2 ppm) is nearly identical to the amount of lithium used in the examples of the patent in suit (1.3 ppm). Lithium is thus not a variant between the starting point chosen in OP9 and operative claim 1. It follows that the amount of lithium in the thermoplastic molding compositions according to operative claim 1 cannot be seen as causally linked to the alleged improved hydrolysis resistance over OP9.

3.6 It follows that the question with respect to the definition of the problem over the examples of OP9 was whether it had been established that an improvement of the hydrolysis resistance of the compositions was causally linked to the choice of the amounts of sodium and potassium in the thermoplastic molding compositions as defined in claim 1 of the main request (sodium and/or potassium in individual amounts of greater than 1.5 ppm with the proviso that both the sodium and the potassium contents individually do not exceed 100 ppm). The respondent considered that examples 2, 3, 5, 7 and the comparative compositions of examples 4, 6 and V1 in Table 1 of the patent in suit were particularly relevant to answer that question.

3.7 The compositions of the examples and comparative examples of the patent in suit all contain 65 wt.-% of a linear polycarbonate based on bisphenol A as component A and 35 wt.-% of ABS polymers prepared by bulk polymerization with an A:B:S ratio of 20:15:65 as components B-1 to B-10, the ABS polymers B-1 to B-10 differing from one another only with respect to their amounts of lithium, sodium and potassium, as disclosed

in Table 1. Table 1 also provides the change in melt volume flow rates (MVR) measured on samples immediately after the compounding and after hydrolytic ageing at 95 °C and 100% relative humidity for 7 days.

3.8 The thermoplastic molding compositions of examples 2, 3, 5 and 7 of the patent in suit all contain 1.3 ppm of lithium (Table 1), an amount that is according to claim 1 of the main request (greater than zero to lesser than or equal to 4 ppm). The amounts of sodium and potassium in these compositions are such that they fulfil the conditions set out in operative claim 1 (amount of sodium and/or potassium individually greater than 1.5 ppm with the proviso that both the sodium and the potassium amounts individually would not exceed 100 ppm). Specifically sodium is present in the compositions in amounts ranging from 0.8 to 6.8 ppm (0.8 ppm in example 5; 2.8 ppm in examples 2 and 7; 6.8 ppm in example 3) and potassium in amounts ranging from 0.8 to 2.8 ppm (0.8 ppm in examples 2 and 3; 2.8 ppm in examples 5 and 7). For these compositions, the MVR change reported in Table 2 is in the range of 8.7 to 12.2 %.

3.9 By comparison, the compositions of examples 4, 6 and V1 of the patent in suit, which also contain 1.3 ppm of lithium, are not according to operative claim 1 as their amounts in sodium and potassium do not fulfil the conditions set out in operative claim 1 (example V1: 0.8 ppm of sodium and potassium; example 4: 176 ppm sodium and 0.8 ppm potassium; example 6: 0.8 ppm sodium and 176 ppm potassium). For these compositions, the MVR change reported in Table 2 is in the range of 12.8 to 24.2 %, higher than in the case of examples 2, 3, 5 and 7 which are according to operative claim 1.

3.10 It can be acknowledged from the data reported in Table 2 of OP9 that the compositions of examples 2, 3, 5 and 7 display an improved hydrolysis resistance over the compositions of example 4 and 6 in which one of the two metals is present in an amount (176 ppm) that is significantly higher than the maximum amount defined in operative claim 1 (below 100 ppm). The question that arose in that regard was whether the examples and comparative examples of the patent in suit allowed any conclusion as to whether the technical benefits of the claimed compositions vis à vis the closest prior art OP9 were achieved within the whole scope of operative claim 1.

3.11 It is however immediately apparent that the examples 2, 3, 5 and 7 of the patent in suit cited by the respondent exemplify a very limited range of amounts of sodium (0.8 to 6.8 ppm) and potassium (0.8 to 2.8 ppm) over the corresponding ranges defined in operative claim 1. It has also not been made plausible that the improvement in hydrolysis resistance observed for examples 2, 3, 5 and 7 in the presence of these limited ranges of sodium and potassium would also be observed up to amounts of 100 ppm as defined in operative claim 1 and no evidence was provided that an improvement of hydrolysis resistance would be present in compositions with amounts of sodium or potassium above 6.8 ppm (sodium) and 2.8 ppm (potassium) considered in the examples 2, 3, 5 and 7 of the patent in suit and up to 100 ppm as defined in operative claim 1. The Board concludes therefrom that the presence of an improved hydrolysis resistance cannot be acknowledged for sodium and potassium amounts in the composition over the whole range of operative claim 1.

3.12 With regard to the amounts in sodium and potassium that belong to the lowest part of the range defined in operative claim 1, the values of MVR change obtained in example 7 (11.6% with 2.8 ppm of both sodium and potassium), example 5 (12.2% with 0.8 ppm of sodium and 2.8 ppm of potassium) and example 2 (8.7% with 2.8 ppm of sodium and 0.8 ppm of potassium) of the patent in suit do not significantly differ from the MVR change obtained in comparative example V1 (12.8%), for which the amounts of sodium and potassium (both 0.8 ppm) were below the minimum value defined in operative claim 1 (greater than 1.5 ppm), and do not show a consistent picture of an improvement of the hydrolysis resistance causally linked to amounts of sodium and potassium greater than 1.5 ppm as is the case for claim 1 of the main request (see e.g. example 7 vs example 2 on one side and example 5 on the other side).

3.13 Doubts about the presence of an improvement for values greater than 1.5 ppm for sodium and/or potassium derive also from the two sets of examples of OP20, the first set (C1, C1-1 to C1-4) based on a composition of 65 wt.-% of a linear polycarbonate based on bisphenol A and 35 wt.-% of an ABS polymer B-1 prepared by bulk polymerization with an A:B:S ratio of 20:14.9:65.1 and the second set of examples based on a composition of 65 wt.-% of a linear polycarbonate based on bisphenol A and 35 wt.-% of an AES polymer B-1 prepared by bulk polymerization with an A:E:S ratio of 17.5:30:52.5. The compositions within any one of the sets of examples according to OP20 differ essentially only in their amounts of sodium and potassium. In that experimental report, the compositions of examples C1-1 to C1-4 (Table 1) containing a comparable amount of lithium (1.1 to 1.5 ppm) and amounts of sodium and potassium according to operative claim 1 display a change in MVR

(0%) that is identical to the composition of example C1 for which both amounts of sodium and potassium are below the range of operative claim 1. That first set of experiments shows that the minimum amounts of sodium and potassium in the composition as defined in operative claim 1 is not critical to the hydrolysis resistance of the composition. The second set of experiments in Table 2 of OP20, for which the amount of lithium is 0.1 ppm and below, shows that compositions containing an amount of sodium and potassium according to operative claim 1 display a decreased hydrolysis resistance (higher change in MVR of 3.4% and 6.7%) than the comparative composition C2 (0%) with amounts of sodium and potassium (both 0.1 ppm) that are below the range defined in operative claim 1. In that respect, OP20 confirms that the minimum amounts in sodium and potassium in the composition cannot be seen as being critical to the hydrolysis resistance. As similar conclusions can be drawn from the data in the patent and in OP20, it is not necessary for the Board to take position on the reliability of OP20 which was put into question by the respondent.

3.14 It follows that the problem over the closest prior art OP9 cannot be formulated according to the effect claimed by the respondent. In the absence of an improvement related to the specific range of values for the amounts of sodium and/or potassium which constitutes the distinguishing feature with respect to the examples of OP9, the Board finds that the problem is to be formulated as the provision of further hydrolysis resistant thermoplastic molding compositions.

3.15 The presence of alkali metal ions such as sodium and potassium ions in compositions based on aromatic

polycarbonates and rubber-modified graft polymers was known in the art, as shown by OP9 (page 2, lines 15-22), OP12 (see paragraphs 34, 48 and 51 in the translation OP12"), OP13 (paragraph 99), OP14 (page 3, line 30 to page 4, line 13) and OP15 (page 2, first paragraph).

3.16 With regard to sodium and potassium specifically, the ranges of amounts defined in claim 1 of the main request overlap with or are encompassed by ranges known in the art for similar compositions with hydrolysis resistance, such as in OP11 (5 ppm or less, and preferably 3 ppm or less in paragraphs 5 and 29, see the translation OP11") and OP14 (less than 1500 ppm, less than 800 ppm or less than 650 ppm on page 5, first paragraph and page 32, line 16 to page 33, line 11) or are close to known ranges such as in OP15 (less than 1 ppm in claim 8). The use of thermoplastic molding compositions according to OP9 additionally defined by a specific amount of sodium and potassium such that sodium and/or potassium are present in an individual amount of greater than 1.5 ppm with the proviso that both the sodium and the potassium contents individually do not exceed 100 ppm in order to provide further thermoplastic molding compositions does therefore not involve an inventive step.

3.17 Thus claim 1 of the main request does not meet the requirements of Article 56 EPC.

Auxiliary requests 1 to 4

4. Inventive step

4.1 Claim 1 of auxiliary requests 1 and 2 was amended by providing a limitation of the ranges defining the

amount in sodium and potassium in the composition, in particular the maximum amount of these metals was reduced to 50 ppm (auxiliary request 1) or 20 ppm (auxiliary request 2).

- 4.2 Claim 1 of auxiliary requests 3 and 4 was amended by providing the same limitation of the ranges defining the amounts of lithium (0.3-3.2 ppm), sodium and potassium (sodium and/or potassium individually exceeding 2 ppm and both the sodium and the potassium contents individually not exceeding 10 ppm), claim 1 of auxiliary request 4 also being limited in that solution polymerization was no longer mentioned as a method of preparation of the rubber-modified graft polymer component B.
- 4.3 The additional limitation of the amount in lithium (0.3-3.2 ppm) in claim 1 of auxiliary requests 3 and 4 however does not constitute a further distinguishing feature vis-à-vis the examples of the closest prior art OP9 for which the amount of lithium was between 0.5 and 2.8 ppm and does therefore not cause any change in the analysis of inventive step with respect to the main request. Also, exactly the same range of 0.3-3.2 ppm of lithium is disclosed in claim 5 of that document.
- 4.4 Besides, the deletion of the solution polymerization from the list of preparation methods of component B in claim 1 of auxiliary request 4 also does not change the analysis of inventive step with respect to OP9 since the components B-1 to B-7 in the examples of that document were prepared by bulk polymerization, which is still part of the preparation methods listed in claim 1 of auxiliary request 4.

- 4.5 The question of inventive step concerning auxiliary requests 1 to 4 therefore boils down to the selection of a range of the amounts of sodium and potassium, for which it has already been established for the main request that they were not associated with an effect. The Board concludes that for the same reasons as outlined for the main request in particular with reference to the lower and the higher limits of the ranges and the tests in the patent and in OP20 the problem solved over the examples of OP9 by the subject-matter of claim 1 of any of auxiliary requests 1 to 4 remains the provision of further hydrolysis resistant thermoplastic molding compositions.
- 4.6 With regard to the obviousness of claim 1 of auxiliary requests 1 to 4, the reasoning provided above for the main request also applies to these requests as it has been established there that similar ranges of amounts of sodium and potassium had already been suggested in the cited prior art in the same context of hydrolysis resistant thermoplastic molding compositions (see point 3.16).
- 4.7 Under these circumstances, the Board concludes that also claim 1 of auxiliary requests 1 to 4 lacks inventive step.

Auxiliary requests 5 and 6

5. Admittance

- 5.1 Auxiliary requests 5 and 6 were filed with the reply to the statement setting out the grounds of appeal. These requests do not correspond to requests filed during the opposition procedure and therefore have not been

discussed prior to the appeal proceedings.

5.2 The reply to the statement setting out the grounds of appeal briefly addressed on page 22 the basis for the amendments made in claim 1 of these requests but no arguments were provided as to why these requests were filed in appeal and how the amendments performed in these requests were relevant to the scope of the present appeal, in particular as to how they could address objections outstanding for the higher ranked requests. That would however have been necessary for the respondent to present its complete case with respect to auxiliary requests 5 and 6 in particular because the additional features, namely the detailed nature of the rubber-modified graft polymer and the limitations in the amounts of lithium, sodium and potassium in the composition, even if individually already present in the granted claims, had never been considered in combination nor discussed as to their relevance to the outstanding objections prior to the appeal proceedings.

5.3 Auxiliary requests 5 and 6 were further briefly addressed in the letter of the respondent dated 10 January 2019. The last two paragraphs on page 8 seem to imply that the limitation of the rubber polymer as component B in claim 1 of auxiliary request 5 would render OP20 irrelevant for the question of inventive step and the limitation of the amount of sodium in the composition of claim 1 of auxiliary request 6 would pertain to examples 2 and 3. However, also these two paragraphs do not provide a detailed and complete argumentation of inventive step regarding these requests, which could put the appellant and the Board in the position to understand the defense of the respondent.

- 5.4 Even after the communication of the Board dated 30 April 2020 in which the issue was raised (section 11.3), the respondent did not address the question of inventive step of auxiliary requests 5 and 6 in detail. In that respect, the fact that the amendment performed in claim 1 of auxiliary requests 5 and 6 would provide further differences with the examples of OP20 or OP9 is in itself not sufficient to conclude that these requests should be seen as inventive over the closest prior art OP9.
- 5.5 It follows that any detailed argumentation of inventive step pertaining to these requests should have been heard for the first time during the oral proceedings before the Board and would constitute a substantial amendment to the appeal case of the respondent, which under the provisions of Article 13(2) RPBA 2020 applying to the present case, shall not be taken into account unless there are exceptional circumstances which have been justified with cogent reasons by the party concerned. As seen above in sections 5.2 and 5.3, such cogent reasons have not been provided by the respondent in appeal.
- 5.6 Auxiliary requests are therefore not admitted into the proceedings.

Conclusion

6. As all request on file are either found not inventive or are not admitted into the proceedings, there is no reason for the Board to decide on any other issue and the patent is to be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated