

Deckblatt Übersetzung

Daten der Übersetzung:

Court/Gericht:	Bundesgerichtshof
Date of Decision / Datum der Entscheidung:	2016-10-05
Docket Number / Aktenzeichen:	X ZR 78/14
Name of Decision / Name der Entscheidung:	Optical component



High requirements for new submission in nullity appeal proceedings – Optical component

EPC art. 76 para. 2, 56; IREPC (AOEPÜ) rule 22; IntPatCA (IntPatÜG) art. II sec. 6 para. 1; Patent Act (PatG) sec. 4, 117, Code of Civil Procedure (ZPO) sec. 531 para. 2 sentence 1 no. 3

1. The fact that a divisional application filed by the applicant was defective in form does not preclude the awarding of seniority stipulated by art. 76 para. 1 sentence 2 EPC in invalidity proceedings, at least not if the defect was fixed at a later time and the divisional application was still admissible at this time.

2. The choice of a certain prior art document or a prior use as starting point for the solution of a technical problem requires a justification (confirmation of BGHZ 179,168 recital 51 = GRUR 2009, 382 – Olanzapine (*Olanzapin*); FCJ, GRUR 2009, 1039 recital 20 – Fish bite indicator (*Fischbissanzeiger*)).

3. When assessing whether a certain starting point was obvious to the skilled person, it is generally irrelevant whether other starting points can be considered as even more obvious.

4. A notice by the Patent Court in accordance with sec. 83 para. 1 Patent Act (PatG) indicating that a feature included in a dependent claim is not known from the submitted documents gives reason to the Plaintiff to point out the reasons for the subject-matter of the dependent claim not being patentable.

Federal Court of Justice, judgment of 5 October 2016 – X ZR 78/14 (BPatG)

Facts:

The Plaintiff is the proprietor of the European patent 1 022 787 (patent in suit) granted with effect for the Federal Republic of Germany, which is based on a parent application dated 31 May 1989 and concerns a surface-mountable optical component and a method for producing it. Patent claim 1 that five further patent claims depend on, reads as follows in the patent as granted:

Method of producing a surface-mountable optical component, in which

- on a leadframe, by means of encapsulation with plastic, a basic element (1) having a front side and a rear side having a depression (5) originating from the front side is formed and then an optical transmitter or receiver (8) is arranged in the depression (5) and, by means of bonding-wire connection, is connected to an electrical connection (6) of the leadframe,
- the leadframe has two electrical connections (6,7) which, as viewed from the centre of the basic element, have narrow regions and broader regions arranged after these, which are joined together in each case,
- the basic element (1) is designed in such a way that the electrical connections (6,7) on mutually opposite side surfaces of the basic element (1) project out of the basic element (1) in the course of the narrow regions, and
- the electrical connections (6,7) in the narrow regions are bent over towards the rear of the basic element (1) and, in the further course in the broader regions, are bent over towards the centre of the basic element (1) at the level of the rear of the latter and, on the rear of the basic element, are placed completely against the latter.

Patent claim 7, which five further patent claims depend on, protects an optical component with corresponding features.

The Plaintiff sued by the Defendant for infringement of the patent in dispute, claimed that its subject matter lacks an inventive step. The Defendant filed for dismissal and, with two auxiliary requests (*Hilfsanträge*), defended the patent in suit in two amended versions.

The *Patent Court* declared invalidity of the patent in suit as far as its subject-matter exceeds the version defended with the second auxiliary request. The remainder of the action was dismissed. Both parties lodged an appeal against the decision (Federal Patent Court (BPatG), judgment of 5 August 2014 – 2 Ni 34/12 [EP], BeckRS 2014, 17886). The Plaintiff still claims for complete invalidation of the patent in suit, the Defendant claims for full dismissal of the claim. Alternatively, it defends the patent in suit primarily in a version which is a further amendment of the version as in the auxiliary request in the first instance and secondarily in the version as in the appealed judgment.

Both parties' appeals are not successful.

Reasons:

[6] I. The patent in suit concerns an optical component mountable on the surface of a leadframe and a method of producing it.

[7] 1. The patent in suit's specification states that, compared to the conventional plug-in-mounting of wired components, the mounting of surface mounted devices (SMD) on the surface of leadframes allows for a reduction of size of up to 70 %, more efficient production and higher reliability.

[8] The patent in suit's specification describes several prior known components having a semiconductor element mounted on a leadframe and cast into a translucent resin.

Regarding one of these components its suitability only for push-through installation (*Durchsteckmontage*) is described as disadvantageous, regarding another, it is described to be disadvantageous that the external connection strips project out laterally from the housing which requires a comparatively large amount of space.

[9] According to the patent specification, the component revealed in Japanese published application Shō 61-42939, with connection strips that are led out laterally from the resin casting but then bent under the resin casting is more advantageous in terms of space requirement. However, it is described as disadvantageous that the connection strips have several bends on their way to the back of the resin casting which allow bouncing in vertical and lateral direction. Producing these bends heavily stresses the components and requires a complex manufacturing process.

[10] Against this backdrop, the patent in suit concerns the technical problem of providing an improved optical component and a method of producing it.

[11] To solve this problem, claim 1 of the patent in suit suggests a method of producing an optical component with features that can be subdivided as follows (the different structure of the *Patent Court* is represented in square brackets):

1. The method is used to produce a surface-mountable optical component [A] and comprises the following steps.

2. On a leadframe, by means of encapsulation with plastic, a basic element (1) is formed [B] having

- a) having a front side and a rear side and
 - b) depression (5) originating from the front side [C].
3. An optical transmitter or receiver (8) is arranged in the depression (5) and, by means of bonding-wire connection, is connected to an electrical connection (6) of the leadframe [D].
4. The leadframe has two electrical connections (6,7) which
- a) as viewed from the centre of the basic element, have narrow regions and broader regions arranged after these, which are joined together in each case [E];
 - b) on mutually opposite side surfaces of the basic element (1) project out of the element (1) in the course of the narrow regions [F];
 - c) in the narrow regions are bent over towards the rear of the basic element (1) [G];
 - d) in the further course in the broader regions, are bent over towards the centre of the basic element (1) at the level of the rear of the latter [G];
 - e) on the rear of the basic element, are placed completely against the latter [G].

[12] 3. Feature 2 [B] requires further discussion.

[13] a) The basic element (1) serves as an encapsulation of the electric lead frame and, at the same time, as a receiver for the optical component (8). According to the patent in suit's description, the separation between the basic element and the optics offers the advantage that the optical component can be varied in many ways regarding design and material depending on the intended use, without having to adapt the housing. This allows to produce an inexpensive basic component and, after the assembly and soldering process, to connect it with an optics fitting for the individual application (para. 18-20).

[14] b) Size and stability of the basic element are not explicitly specified in claim 1.

[15] However, it follows from feature 2 [B] requiring the basic element to be formed by encapsulation of the lead frame, that the basic element must completely surround the lead frame at least in a certain area. Furthermore, it can be deduced from the connection to feature group 4 [features E, F and G] that the basic element must be sufficiently stable to hold the two electrical connections (6, 7) together. This is expressively highlighted in the description (para. 26).

[16] This may lead to the conclusion that the basic element needs to be sufficiently "solid" ("*massiv*"). Contrary to the Defendant's opinion, this is, however, not an independent feature. The extent to which the basic body must be "solid" is rather determined by the requirements it must meet in order to fulfil its function as an encapsulation of the lead frame and as a receiver for the optical component.

[17] c) The way the optical component (8) is arranged in or attached to the basic element is specified in claim 1 only to the extent that the electrical connection to the lead frame is made by means of a bonding-wire.

[18] The description explains that the depression (5) the optical component is arranged in can be casted with casting resin. This is mandatory in patent claim 2.

[19] II. The *Patent Court* has essentially substantiated its decision as follows:

[20] The subject-matter of the patent in suit in the version as granted and, in the version, as in the auxiliary request 1 is rendered obvious by the state of the art to the skilled person, an electrical

engineer with a degree from a University of Applied Sciences who is familiar with the production of components suitable for surface mounting.

[21] However, the parent the patent in suit arises from does not belong to the prior art, even if the divisional application the patent in suit is based on would have been ineffective due to lacking identity of applicants; this procedural error does not constitute a ground for invalidity and is rectified by the grant of the patent in suit.

[22] However the patent in suits subject-matter is rendered obvious by the Japanese published application Shō 61-42939 (NK3). NK3 discloses a method of producing a surface-mountable electronic component having feature 2 [B] and those of feature group 4 [features E, F and G]. The description of NK3 points out that the described method is not only applicable to produce capacitor components but also to produce any electric component. Thus, the skilled person also considers NK3 to produce an optical component. To do this, the skilled person adapts the method according to features 2b and 3 [C and D]. The provided design is customary for light-emitting diodes which is shown by Japanese Design 744802 (NK2).

[23] The same applies for the patent in suits subject-matter in the version as defended by the auxiliary request 1. The additional features provided by this claim are customary measures for light-emitting diodes which is shown by Japanese published applications Shō 55-105388 (NK8) and Shō63-300578 (NK9) and by German published application 23 09 586 (NK10).

[24] The patent in suit's subject-matter in the version as defended in the auxiliary request 2 is based on an inventive step. NK3 and NK9 do not include specifications for the choice of material. As a material for the basic element, NK8 and NK10 disclose epoxy resin and thus a duroplastic material. From the skilled person's view, the thermoplastic materials provided in the auxiliary request 2 cannot be regarded as alternative option without further ado, since they are thermally resistant only to a limited extend.

[25] III. This ruling holds against both parties' appeals:

[26] 1. The *Patent Court* was right in not considering the parent application published under No. 400 176 (NK1) as prior art.

[27] Until now, the *Senate* did not decide if and under which requirements formal or material errors of a divisional application can lead to the divisional application not being granted the seniority stipulated in art. 76 para. 1 sentence 2 EPC (for German patents: sec. 39 para. 1 sentence 4 Patent Act) in invalidity proceedings and if, in the event of the divisional applications publication, this can lead to it being considered as prior art (BGHZ 152, 172 [176 et seq.] = GRUR 2003, 47 [48] – Saddle stitcher (*Sammelhefter*)).

[28] In this dispute, this question does not require a decision. In any case, the divisional application filed by the Defendant has become valid because a possible procedural error has been subsequently rectified.

[29] According to the EPO's decision practice, only the applicant has the right to divide the application. Art. 76 EPC does not expressly stipulate this. However, the purpose of art. 76 EPC is to implement art. 4 (G) Paris Convention (PVÜ) and must therefore be interpreted in the light of this provision (EPO Official Journal 2005, 88 recital 2.4 – Divisional application/The Trustees of Dartmouth College).

[30] It can remain undecided whether it follows from the above-mentioned decision practice that, in the event of a transfer of rights, a divisional application by the new right holder may only be lodged if the new right holder proved the transfer of rights by submitting documents in accordance with

rule 22 para. 3 Implementing Regulations to the EPC (AOEPÜ) (in the here relevant version: Rule 20 para. 3 Implementing Regulations to the EPC (old version)). If these requirements are not met at the time of filing a divisional application by the holder of the material rights, this only leads to a formal error in law which, in accordance with the purpose and intent of art. 76 EPC, is no longer significant if the requirements stipulated by rule 22 Implementing Regulations to the EPC (AOEPÜ) are met at a later time and the divisional application is still admissible at this time.

[31] Unlike art. 87 para.1 EPC, art. 76 EPC does not stipulate a limitation period for the claim of the right of priority. In accordance with rule 36 para. 1 Implementing Regulations to the EPC (AOEPÜ) in the version applicable until 31 March 2010 and again since 1 January 2014, a divisional application is admissible as long as the parent application is pending. Within this timeframe, a divisional application can be replaced by a new divisional application. In any case, regarding the question which seniority a divisional application is to be granted in nullity proceedings against a patent granted based on a divisional application, it cannot make a difference whether the applicant rectifies the formal error by filing a new, correct application having the same content or by correcting the already pending application in specific points. In both cases, the applicant expressed sufficiently clear that it claims the parent application's seniority also for the divisional application within the timeframe stipulated in the convention and the implementing regulations.

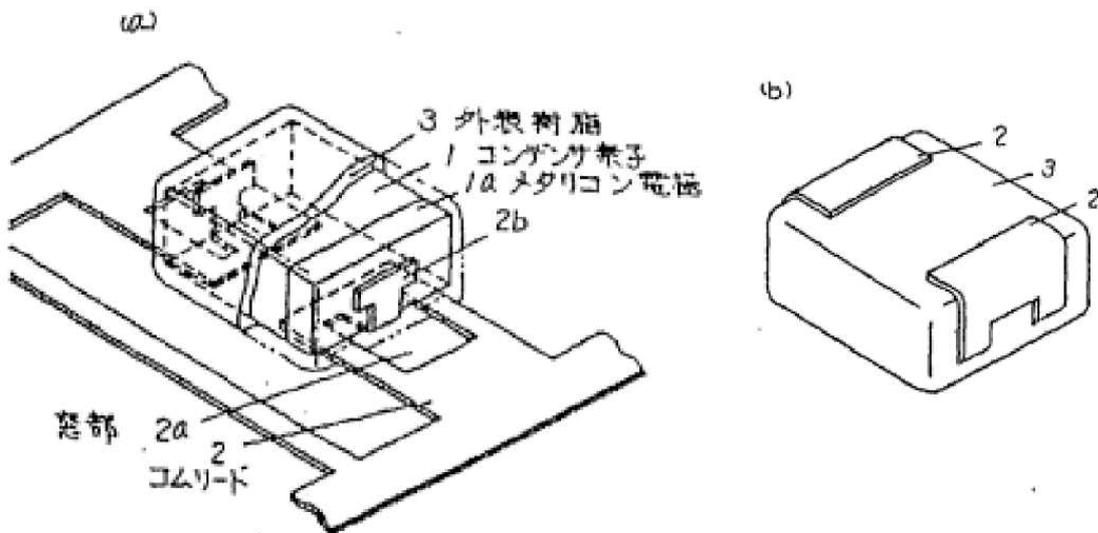
[32] b) Against this backdrop, the *Patent Court* was right to conclude that the divisional application the patent in suit is based on is to be granted the seniority of the parent application. In this dispute, a possible violation of rule 20 para. 3 Implementing Regulation to the EPC (AOEPÜ) (old version) was subsequently rectified by the application filed on 12 May 2000 for correction of the applicant of the divisional application.

[33] Whether the EPO did rightly grant the application and whether this decision is subject to the review in nullity proceedings does not need to be decided. In any case, the letter shows with sufficient clarity that the registered applicant wishes the divisional application to be considered as originating from it. The divisional application thus met the requirements of rule 20 para. 3 Implementation Regulations to the EPC (AOEPÜ) (old version) from this date on – at which the parent application was still pending.

[34] 2. The *Patent Court* was right in concluding that the subject-matter of patent claim 1 in the version as granted was rendered obvious to the skilled person by prior art documents NK3 and NK2.

[35] Correctly, the *Patent Court* decided that NK3 discloses a method including feature 2 [B] and feature group 4 [features E, F and G].

[36] aa) Contrary to the Defendant's opinion, NK3 does not only concern a surface-mountable component but also the relevant steps to produce such a component. The description regarding figure 1a (cited by the Defendant in another context) states that parts projecting upwards (2b) of a comb electrode (*Kammelektrode*) (2) are welded on a metalicon-electrode (*Metallicon-Elektrode*) (1a). Subsequently, an encapsulation with resins having a thickness of 0.5 mm is applied. Then, the comb electrode is cut at predetermined points and a bending process is performed in order to obtain the capacitor shown in figure 1b (NK3a p. 2 bottom).



[37] bb) As even the Defendant does not doubt, the comb electrode (2) disclosed in NK3 is equivalent to the lead frame described in feature 2 [B] of the patent in suit. It has two electrical connections arranged and designed as defined in feature group 4 [features E, F and G].

[38] cc) Contrary to the Defendant's opinion, the encapsulation (3) disclosed by NK3 is a basic element according to feature (2) [B].

[39] The description of NK3 does not include specifications concerning the stability of the encapsulation. However, the context shows that the encapsulation must be sufficiently stable to hold the components arranged in it. Thus, the encapsulation disclosed in NK3 must be concerned as "solid" in the same way as the basic element according to feature (2) [B]. As described in the patent in suit's description, it is left to the skilled person, how the required stability can be achieved.

[40] b) The *Patent Court* was also right in concluding that the skilled person had reason to consider the method disclosed in NK3 to produce an optical component like the one disclosed by NK2.

[41] aa) Contrary to the Defendant's opinion, the skilled person entrusted with the problem of the patent in suit had reason to consider NK3 as starting point.

[42] (1) In accordance with the jurisprudence of the *senate*, the choice of a starting point for the solution of a technical problem requires a justification.

[43] The – only from a retrospective point of view possible – classification of a certain starting point as the "closest" prior art is neither sufficient (BGHZ 179, 168, recital 51 = GRUR 2009, 382 – Olanzapine (*Olanzapin*)) nor necessary (Federal Court of Justice, GRUR 2009, 1039, recital 20 – Fish bite indicator (*Fischbissanzeiger*)) for this. Rather, concrete circumstances are required which, at the priority date, gave the skilled person reason to consider a certain prior art document or prior use as starting point for his considerations. As a rule, this justification is the skilled person's effort to find a better or other solution for a certain purpose than those provided by prior art (BGHZ 179, 168, recital 51 = GRUR 2009, 382 – Olanzapine (*Olanzapin*)).

[44] In this dispute, regarding NK3, this is not excluded by the fact that this prior art concerns a capacitor, while NK2 concerns an optical component.

[45] It does not require a decision whether, from a retrospective point of view, due to this NK2 could be regarded as "closer" prior art in comparison to NK3. Even if this were to be confirmed,

this would not mean that NK3 or other prior art documents would be excluded as possible starting point.

[46] If, from the skilled person's point of view, several alternatives for the solution of a problem are considerable, a plurality of those can be obvious. At this, it is principally irrelevant which solution the skilled person would consider first (Federal Court of Justice, GRUR 2016, 1023 recital 36 – Call routing method (*Anrufroutingverfahren*)). Accordingly, for the question of whether a certain starting point was obvious to the skilled person, it is principally irrelevant whether other starting points might be considered as even more obvious.

[47] (3) Against this backdrop, the *Patent Court* was right to conclude that the skilled person had reason to consider NK3 as starting point for his considerations.

[48] The information included in NK3's description, that the disclosed invention is not only applicable for the capacitor shown as one way of carrying out the invention but also for every other electric component, may not by itself be sufficient for this. However, the advantages sought by NK3 – especially the possibility of achieving a higher reliability at lower production costs (NK3 p. 2) – largely correspond with the patent in suit's problem. Additionally, the solution provided by NK3 does not indicate any specific connection to the function of the electronic component. It rather concerns aspects also relevant for a large number of surface-mountable electronic components. In view of all this, the skilled person had reason to consider whether the solution disclosed by NK3 could also be contemplated for the production of surface-mountable optical components.

[49] bb) Without adaptations, the method disclosed by NK3 cannot be used to produce optical components. However, known optical components like the components shown by NK2 provided the skilled person with sufficient suggestions for the question of which measures can be considered for the respective adaptations.



[50] (1) NK2 shows a surface-mountable optical component in different views.

[51] Thus, a surface-mountable optical component is disclosed which has features 1 to 4c [features A to F and a part of feature G] and with a structure that corresponds with the component disclosed in NK3 with regard to the features 2, 4a, 4b and 4c [features B, C, E and F and a part of feature G] concerning the mountability on the surface.

[52] (2) To the skilled person, this confirms the information given by NK3 that the shown structure can be used for other components than capacitors as well and concretizes this suggestion that this applies especially to optical components.

[53] As starting point for the implementation of this suggestion, the skilled person considered the component disclosed by NK2 as well as the component disclosed by NK3.

[54] To the skilled person entrusted with the patent in suit's problem, NK2 may have been particularly interesting, since it discloses an optical component. On the other hand, the skilled person could not gather any further information on the advantages and disadvantages of the solution disclosed by NK2, which was only claimed as a design. NK3 provided this information including the suggestion – confirmed by NK2 – that the information can also be used for optical components. Thus, the skilled person not only had reason to adopt the component disclosed by

NK2 essentially unchanged. Rather, it was also obvious to use the solution disclosed by NK3 as starting point and transfer it to an optical component.

[55] (4) Based on the solution disclosed in NK3, it was obvious to adopt the disclosed arrangement of the electrical connections unchanged – i.e. including feature 4d.

[56] The only essential difference between the electrical components disclosed by NK2 and NK3 is that in the case of NK2, the transitions between the narrow to the broader regions are – in difference to feature 4d – located not at the sides of the component but at its bottom. Neither NK2 nor NK3 clearly indicate the advantages and disadvantages of this difference.

[57] In view of this, the skilled person may have had no reason to change the solutions described by NK2 and NK3 particularly in this detail. However, this and the fact that both prior art documents could be considered as starting point show that, for the skilled person, both arrangements were obvious. On the basis of the solution disclosed by NK2, there may have been reason to keep the transitions from the narrow to the broader regions at the bottom of the component. However, based on NK3, there was reason to arrange the transition at the sides of the component.

[58] 3. Regarding the subject-matter of patent claim 7, like assumed by both parties as well, there is no different assessment. The embodiment protected thereby is not patentable for the same reasons as the method protected by patent claim 1.

[59] 4. Nothing else applies for the subject-matter of patent claim 1 in the version as defended with the auxiliary request 1.

[60] It does not need to be decided, whether the substitution, provided by the auxiliary request, of the expression “basic element” by “solid basic element” leads to a substantial change. As shown above, nothing more can be taken from the attribute “solid” than that the basic element has to be sufficiently stable in order to fulfil its function. This attribute is also disclosed by NK3.

[61] 5. The subject-matter of patent claim 1 in the version of the appealed judgment is patentable on the basis of the prior art documents that need to be considered.

[62] a) The *Patent Court* was right in concluding that the use of thermoplastic material for the production of the basic element provided by this version was not rendered obvious to the skilled person by the prior art documents relevant in the first instance.

[63] aa) Of these prior art documents, only NK8 includes further information on the used material.

[64] According to NK8, the basic element is made of epoxide resin. According to the non-appealed findings by the *Patent Court*, this is a duroplastic material. Thus, there is no indication to use a thermoplastic material.

[65] Contrary to the Plaintiff’s opinion, the fact that, according to NK8, the interior space the light-emitting diode is arranged in, is casted with a thermoplastic material, namely acrylic resin, does not lead to another conclusion. The fact that different materials having different attributes are used for the two parts of the optical component does rather argue against the substitutability of these materials.

[66] bb) Contrary to the Plaintiff’s opinion, the use of thermoplastic material instead of duroplastic material is not rendered obvious by the fact that there are only those two kinds of plastics.

[67] As even the Plaintiff does not doubt, thermoplastic materials and duroplastic materials are not interchangeable. Their suitability for a certain use rather depends on the characteristics of the material required in the individual context. Thus, the skilled person requires an indication to use

thermoplastic material for the production of the basic element of the component produced in accordance with the protected method.

[68] No further findings can be derived from the additional documents on general technical knowledge (SB1 to SB3) submitted in the second instance. The documents only describe general features of certain plastics but not their suitability for the production of a basic element of an optical component.

[69] cc) Contrary to the Plaintiff's opinion, the fact that the basic elements are produced by casting according to NK8, and by injection moulding (*Spritzgießen*) according to NK9 does not lead to a different assessment.

[70] As even the Plaintiff does not doubt, duroplastic materials can also be processed by injection moulding. The fact of injection moulding of thermoplastic material being generally less expensive only gives reason to consider this alternative, when the suitability of this material for the concrete use is to be expected. As explained above, NK8 and NK9 do not provide any indication to this.

[71] b) The US patent specifications 4 781 960 (SB4) and 4 032 963 (SB5) submitted additionally in the second instance are not to be taken into account in accordance with sec. 117 Patent Act (PatG) and sec. 531 para. 2 Code of Civil Procedure (ZPO).

[72] aa) Contrary to the Plaintiff's opinion, both prior art documents and the submission hereto do not only deepen and concretize the submissions in the first instance.

[73] In the first instance, the Plaintiff generally claimed that the skilled person's general knowledge of the characteristics of thermoplastics and duroplastics already indicated the use of thermoplastic material. On the contrary, in its submission regarding SB4 and SB5, the Plaintiff claims that thermoplastics were used for the here relevant purpose in the prior art. Thus, the Plaintiff provides a new aspect (see BGHZ 194, 290 recital 36 = GRUR 2012, 1236 – Alternator for cars (*Fahrzeugwechselstromgenerator*)).

[74] bb) Already in the first instance, the Plaintiff had reason to submit prior art documents providing an indication to use thermoplastic material for the production of a basic element according to feature 2 [B].

[75] The notice given by the Patent Court in accordance with sec. 83 para. 1 Patent Act (PatG), that the feature inter alia included in patent claim 6 – the production of the basic element from thermoplastic material – was not known from the submitted documents, showed the Plaintiff that the Patent Court found the subject-matter of this claim to be at least potentially patentable. Thus, the Plaintiff was held to supplementary submit within the set period of time. The Plaintiff did react and supplementary submitted by presenting prior art documents NK8 to NK10.

[76] Diligently handling the case, the Plaintiff could and should have recognized that this submission was not sufficient for the denial of patentability. The *Patent Courts* notice did not specify in detail which aspects could be of significance in this respect. However, there was no reason for such notice since it is to the Plaintiff to point out the reasons for the denial of patentability. Additionally, the Plaintiff had to conclude from the Court's notice, that the feature in question was "not known" from the prior art documents, that the Plaintiff's claim would only be successful if it submitted prior art documents disclosing the use of thermoplastic material for the purpose in question or at least including a concrete suggestion for this. The Plaintiff did not set forth that it had not been able to find the prior art documents SB4 and 5 when conducting a diligent research hereto.

[77] IV. The decision on costs is based on sec. 121 para. 2 Patent Act (PatG), and on sec. 92 para. 1 and sec. 97 para. 1 Code of Civil Procedure (ZPO).

[78] Contrary to the *Patent Court's* opinion, the *Senate* does not see one party winning predominantly. A predominant win of the Plaintiff cannot be followed from the fact that the Defendant only succeeded with the second auxiliary request. Relevant is to which extent the patent in suit's subject-matter has been limited by the partial declaration of invalidity. In this respect, the *Senate* does not see a predominance benefitting one party or the other. Thus, it seems appropriate for both parties to share the costs of both instances.