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# Datasheet for the decision of 11 July 2013

**Case Number:** T 2454/09 - 3.2.07

**Application Number:** 00100023.1

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**IPC:** B05D 5/06, B29C 70/64, B05D 1/12, B32B 5/16, D06N 7/00

**Language of the proceedings:** EN

**Title of invention:**
A method of manufacturing coverings and a covering produced thereby

**Patent Proprietor:**
Mondo S.p.A.

**Opponent:**
Nora systems GmbH

**Headword:**
-

**Relevant legal provisions:**
EPC Art. 54, 56, 100(c), 114(2), 123(2)
RPBA Art. 12(4)

**Keyword:**
"Amendments: allowable (yes)"
"Late submitted material - document admitted (no)"
"Novelty (yes)"
"Inventive step (yes)"

**Decisions cited:**
T 1001/02

**Catchword:**
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

**Case Number:** T 2454/09 - 3.2.07

# D E C I S I O N
**of the Technical Board of Appeal 3.2.07**
**of 11 July 2013**

**Appellant:** (Patent Proprietor)
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**Decision under appeal:**
**Decision of the Opposition Division of the European Patent Office posted 2 November 2009 revoking European patent No. 1020282 pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman:** H. Meinders
**Members:** H. Hahn
I. Beckedorf

## Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal against the decision of the Opposition Division to revoke the European patent 1 020 282.

II. The following documents cited in the impugned decision are relevant for the present decision:

D1 = DE-C-44 05 589
D5 = DE-U-88 12 749

as well as the following document which was submitted by the respondent during the appeal proceedings:

D8 = US-A-1 816 822

III. The opposition had been filed against the patent in its entirety under Article 100(a) EPC, for lack of novelty and inventive step, and under Article 100(c) EPC, for extending beyond the content of the application as originally filed.

The Opposition Division held hat claim 1 of the patent as granted according to the main request meets the requirements of Article 123(2) EPC. The Opposition Division considered that the subject-matter of claim 1 of the main request was novel with respect to D1 but lacked inventive step over a combination of the teachings of D1 and D5. The subject-matter of claim 1 of the first auxiliary request as filed at the oral proceedings of 15 September 2009 was considered to comply with Articles 84 and 123(2) EPC and to be novel but was also considered to lack an inventive step with

respect to a combination of D1 and D5. Consequently, the patent was revoked.

IV. With a communication dated 25 January 2013 and annexed to the summons to oral proceedings the Board presented its preliminary opinion with respect to claims 1-7 of the patent as granted according to the single request filed together with the statement of the grounds of appeal dated 1 March 2010.

With respect to the admissibility of the newly submitted document D8, filed by the respondent (opponent), it remarked amongst others that it would be discussed whether or not D8 should be introduced into the proceedings.

Concerning the issue of Article 123(2) EPC it remarked that the Opposition Division's acceptance of the omission of the feature "… the uniformity … being ensured by the further particles (P1) …" from claim 1 as granted appeared to be correct.

The subject-matter of claim 1 of the patent as granted appeared to be novel over the disclosure of D1 since three features appeared not to be directly and unambiguously derivable therefrom.

With respect to inventive step the Board remarked amongst others that it would be discussed - taking account of the problem-solution approach based on the distinguishing features (which appeared to be the features a) and b) as mentioned in the impugned decision: a) the particles are added to the mixture in the form of vulcanised material, b) the particles are

homogeneously dispersed in the basic component as well as the feature c): the decorative P2 particles are distributed in a sparse arrangement), whether or not the person skilled in the art, when starting from the teaching of the - undisputed - closest prior art D1, in particular the preferred embodiment according to its figure 3, would have any incentive to modify the teaching of D1 by applying his common general knowledge and/or in combination with the teaching of D5, resulting thus in the subject-matter of claim 1 as granted.

V. With letter dated 13 May 2013 the respondent submitted, as a response to the summons to oral proceedings, arguments concerning the admissibility of D8 and further arguments concerning Article 123(2) EPC with respect to the deletion made in claim 1 of the patent before grant, as well as further arguments with respect to lack of novelty and inventive step.

VI. With letter dated 14 May 2011 [sic] submitted by fax on 14 May 201**3** the appellant announced, as a response to the summons to oral proceedings, that it would not attend the oral proceedings.

VII. Oral proceedings before the Board were held on 11 July 2013. As announced with its letter submitted 14 May 2013 the appellant did not attend, therefore the oral proceedings took place in its absence in accordance with Rule 115(2) EPC and Article 15(3) RPBA. To start with, the admissibility of the amendment of claim 1 of the patent as granted was discussed. Thereafter the issue of admissibility of D8 was briefly discussed. This was followed by the discussion of novelty with

respect to D1. Thereafter inventive step of claim 1 was discussed, particularly in the light of a combination of the teaching of D1 with that of D5.

(a) The appellant requested in the written proceedings that the decision under appeal be set aside and that the patent be maintained as granted.

(b) The respondent requested that the appeal be dismissed.

At the end of the oral proceedings the Board announced its decision.

VIII. Independent claim 1 of the patent as granted reads as follows:

"1. A method of manufacturing a covering, comprising the steps of:

- forming a laminar base layer (W) from a mixture containing a basic component having homogenously dispersed therein a phase of particles (P1), wherein the basic component is not yet vulcanized,
- distributing decorative particles (P2) on the base layer (W) in a sparse arrangement, substantially preventing overlapping of the decorative particles (P2), wherein the decorative particles (P2) are in the form of vulcanizable material,
- fixing (5) the decorative particles (P2) to the base layer (W) by vulcanizing the composite constituted by the base layer (W) and by the decorative particles (P2), characterized in that

- the particles (P1) are added to the mixture in the form of particles of vulcanized material."

IX. The appellant argued, insofar as relevant for the present decision, in the written proceedings essentially as follows:

The Opposition Division correctly decided the issues of Articles 123(2) and 54 EPC.

The Opposition Division applied the problem-solution approach incorrectly. If it would have applied the principles of the Guidelines C-IV, 11.7 (version 2007) onwards correctly, namely:
i) determining the closest prior art,
ii) establishing the objective technical problem to be solved, and
iii) considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person
it would have had to confirm inventive step of the invention of the patent in suit.

The aesthetic appearance of the covering - i.e. the problem of avoiding the presence of fairly extensive and, moreover, unpredictably distributed areas of the basic web substrate in which the number of decorative particles becomes extremely small or even zero, such limited presence or even absence of decorative particles in some regions of the covering being considered undesirable or disagreeable to the user - is a *technical* problem which has been presented and considered as the underlying problem of the invention

from the very beginning (see page 1, third paragraph and page 2, second paragraph of the application as originally filed corresponding to paragraph [0007] of the patent in suit), in view of e.g. EP-A-0 528 059. This situation did not change during examination as a result of document D1 being cited, and no re-definition of the technical problem underlying the invention occurred during examination or during opposition, where document D1 was again relied upon by the opponent as the closest prior art.

The invention solves that problem by a sort of "visual homogenisation" of the appearance of the covering in order to remedy for the possible presence of areas of the basic web (substrate) where no decorative particles P2 are present which is achieved by admixing to the mixture forming the base layer or substrate further (typically smaller) particles P1 in the form of vulcanised material (see figure 2 of the patent in suit).

There is no teaching whatsoever in the prior art that would have prompted the skilled person faced with the mentioned objective technical problem, to modify D1 in the direction of the invention. In D1 the basic component of the covering has a uniform colour while in the arrangement of the invention (see e.g. figure 2 of the patent in suit) the structure of the base layer in question is modified by dispersing therein a phase of (typically smaller) particles P1 in the form of vulcanised material so that these particles are homogeneously dispersed in the basic component and avoid that the presence of fairly extensive "empty spaces" in the distribution of the decorative particles

P2 becomes noticeable to the user. D1 does in no way teach, suggest or even remotely hint at the possibility of modifying the structure of the basic component or base layer, which in document D1 retains a visually homogeneous, undifferentiated appearance. Consequently, document D1 is deprived of any teaching that **would** have prompted the skilled person faced with the objective technical problem to modify the method of D1 in the direction of the invention.

D5 is likewise devoid of such teaching. Specifically, it discloses a method of manufacturing a covering wherein a laminar layer is formed by vulcanising a mixture containing a not yet vulcanised basic component having dispersed therein a phase of particles which are added to the mixture in the form of vulcanised material and are homogeneously dispersed therein (see e.g. page 5, lines 2 and 3; page 8, lines 4 to 10; claim 1). Consequently, D5 is likewise completely void of any teaching, suggestion or mere hint at the possibility of modifying the structure of the basic component in the spaces between the decorative particles in order to compensate for the possible presence of empty spaces.

D5 with the specific features disclosed therein shows - at most - that the skilled person **could** adapt or modify the closest prior art D1 in the direction of the invention. The key point in applying the problem-and-solution approach is, however, whether the skilled person in the art **would** have done so because the prior art D1 and D5, possibly in combination with his general knowledge contains an incentive to do so in the hope of solving the objective technical problem or in expectation of some improvement or advantage.

Neither D1 nor D5 considers, even remotely, the problem of dealing with "empty spaces" possibly arising between adjacent decorative particles, especially when these decorative particles, according to the wording of claim 1 as granted, are distributed on the base layer in a sparse arrangement, substantially preventing overlapping of the decorative particles.

The claimed invention does in no way amount to a "one-way street" situation. Visual homogenization as achieved in the invention could - notionally - be achieved simply by providing additional smaller particles P1 to fill-in the "empty spaces" between the decorative particles P2 by "sowing" the particles P1 in the spaces between the decorative particles P2. However, if "sown" in the form of already vulcanised particles onto a base layer yet to be vulcanised, these particles P1 would give rise to undesirable surface roughness of the covering. This could only be removed by machining the surface of the covering, which would result in most of the "fill-in" particles being removed again (while also damaging the decorative particles).

In the invention, these possible serious disadvantages are avoided, and the fill-in effect of the undesired "empty spaces" is achieved by ensuring that the particles are added to the mixture in the form of particles of vulcanised material, and the particles are homogeneously dispersed in the basic component.

The incorrect appreciation of the technical problem underlying the invention (see point 2.3.3 of the appealed decision) indicates that according to document

D1 the appearance of the covering surface with discernible, uniformly distributed particles is achieved in a different way while point 2.3.5 also indicates that the measures defined by features a) and b) constitute a known alternative to the measures taken in document D1 for solving the **same problem**. This is similarly incorrect since:
a) D1 addresses the problem of ensuring the appearance of the covering surface with discernible, uniformly distributed particles (see column 3, lines 1 to 17), i.e. avoiding "blurring" in the decorative particles;
b) the invention addresses the problem of avoiding the presence of fairly extensive and, moreover, unpredictably distributed areas ("empty spaces") of the basic web substrate in which the number of decorative particles becomes extremely small or even zero may become undesirably noticeable to the user.

The Opposition Division took a different approach by:
- taking the (individual) features distinguishing the invention over the closest prior art (i.e. D1), and
- defining some (completely new) technical problems based on these individual features, namely
i) the problem to ensure that clearly discernible particles remain in the enclosing basic component, and
ii) the problem to ensure that the particles (parts of the particles) visible at the surface of the covering are uniformly distributed (see point 2.3.2 of the reasons).

As support for such an approach the Opposition Division referred to the patent in suit, paragraphs [0017] and [0019]. In the context of discussing inventive step, referring to the patent in suit plainly amounts to

applying the very disclosure of the opposed patent against the patent itself, which is rather absurd: the patent is anticipated by itself.

Points 2.3.3 and 2.3.4 of the reasons reveal that - exactly as in the patent in suit - the distinguishing features a) and b), which are known from document D5, solve the very problems **defined on the basis of these features**. This is far from surprising: features a) and b) do solve the problems which were defined based thereon. However, this has no relevance in answering the basic question of whether there is any teaching in the prior art (e.g. D1 and/or D5) that **would** (not simply **could**) have prompted the skilled person to modify the product of D1 in the direction of the invention.

That the distinguishing features a) and b) may be known *per se* from document D5 and (not surprisingly) may have, within the framework of the invention, the same effects they had in document D5 provides no evidence that it would have been obvious to add those features to the product already known from D1 to solve the underlying problem of that product.

Both points 2.3.3 and 2.3.5 of the reasons demonstrate that the reasoning was dictated by the - factually - incorrect view that the invention would solve, in a possible different, alternative way, the same problem of D1, namely providing the appearance of the covering surface with discernible, uniformly distributed particles (i.e. avoiding "blurring").

The problem underlying the invention is **not** avoiding "blurring" of the decorative particles nor is it even remotely concerned with the re-use of production residues in the same process. Any discussion related to this issue (see point 2.3.6 of the reasons) is - irrespective of whether the statements provided therein are correct or not - completely irrelevant to the issue of inventive step.

Claim 1 of the patent as granted therefore involves inventive step.

X. The respondent argued, insofar as relevant for the present decision, essentially as follows:

The feature "… the uniformity of appearance of the covering nevertheless being ensured by the further particles (P1) dispersed homogenously in the mixture" was contained in claim 1 of the application as originally filed. By omitting this feature from the subject-matter of claim 1 of the patent as granted, the latter extends beyond the content of the application as originally filed. This is due to the fact that claim 1 of the patent as granted does not define any particle sizes, colours or amounts of the particles P1 and P2 which are responsible for the now omitted feature of the uniformity of the appearance. To obtain a uniform appearance a certain amount of (contrasting) coloured particles of discernible size is necessary. Therefore, in view of paragraph [0031] of the patent, this omission changes the teaching of the patent, contrary to Article 123(2) EPC.

Document D8 should be introduced into the proceedings since it discloses the incorporation of vulcanised particles and the problem of veining, no further arguments are presented in this context.

D1 is novelty destroying for claim 1 as granted on the basis of the process according to figure 3 and its description (column 5, line 20 to column 6, line 6) and column 2, lines 15 to 20 which discloses the feature of a sparse arrangement of the contrasting colour decorative particles.

The feature of a homogenous distribution of the particles P1 in the matrix is also disclosed in D1 since it is clear to the skilled person from figure 3 that the granules 8 will be homogeneously dispersed in the matrix of granules 5 due to the mixing of the two different types of granules occurring in the nip area, the granules 8 being eccentrically sprinkled into the nip between the two calender rolls while the granules 5 are centrically sprinkled into said nip. D1 mentions specifically the possibility of forming arbitrary patterns (see column 5, lines 48 to 53), which implies a disclosure also of the opposite: a homogenous distribution of said granules 8 in the web 1. Furthermore, the eccentric feeding of the granules 8 represents only a preferred embodiment within the general teaching of D1 (see column 3, lines 8 to 12) so that for the skilled person it is also implicit that the standard case is centrically feeding the granules 8 which in any case results in a homogenous distribution (see column 2, line 66 to column 3, line 8).

Mixing of the granules 8 with the granules 5 in said nip according to D1 is desired and necessary (see column 3, lines 8 to 14). In view of paragraph [0006] of the patent also the question arises to what extent this feature represents a technical feature since it actually results in an aesthetic design so that this feature, in accordance with T 1001/02 (not published in OJ EPO), need in any case not be considered.

D1 does not explicitly disclose the feature concerning the addition of vulcanised particles (granules 8) but it mentions the recycling of waste material (see column 4, lines 26 to 30) and generally mentions that the second granules 8 are made from rubber mixtures (column 4, lines 46 to 50). The latter in general implies unvulcanised rubber but the skilled person would also read into the disclosure of D1 the use of vulcanised rubber material since it mentions that all suitable elastomeric materials can be used (see column 3, lines 40 to 44). Furthermore, it is also implicit that the granules 8 are vulcanised since it would not be possible to use unvulcanised rubber granules with the calender roll apparatus shown in figure 3 and therefore the granules 8 have to be vulcanised.

D1 represents the undisputed closest prior art. Claim 1 is distinguished therefrom by the mentioned three features a), b) and c) (see point IV above) which solve different partial problems.

The effect of the feature b) that the particles P1 are vulcanised is that a precise individuality of them during mixing in the basic component is ensured (see

patent, paragraph [0017]). D5 discloses the solution to the underlying partial problem of maintaining a precise individuality of the particles in the matrix after the mixing step, namely it teaches to disperse vulcanised particles in the matrix to avoid any blurring (see page 5, second paragraph). The skilled person would therefore combine the teaching of D1 with that of D5 even if that would imply an additional process step before the formation of the web in order to avoid blurring or veining of the coloured granules 8 in the calender nip of D1.

It is contested that D1 suggests introducing the particles 8 only in what becomes the outer surface of the web formed from the granules 5 and 8 since the centric interspersing/sprinkling of these particles is implicitly disclosed.

Feature a), the homogeneous dispersion of the particles P1 in the web results in a uniform appearance (see patent, paragraph [0031]). A further technical effect is not mentioned in the patent in suit. This effect of a more uniform appearance is, however, already obtained through the particles 8 and 2 according to D1 (see figure 3).

Feature c), the sparse arrangement of the decorative particles P2 prevents or limits overlap of these particles (see patent, paragraph [0006]). This represents, however, no technical feature but an aesthetic design feature (see T 1001/02, already mentioned). The solution to this partial problem is in any case obvious to the person skilled in the art who would correspondingly apply a restricted amount of

these particles to prevent their overlapping. This is also taught by D1 (see column 2, lines 15 to 20).

A combinatorial effect of the distinguishing features as argued in the patent in suit cannot be seen and the basic idea of a combination of the homogenous distribution of particles and a sparse arrangement of further decorative particles is known from D1.

Hence the Opposition Division's conclusions concerning lack of inventive step in the impugned decision are correct.

## Reasons for the Decision

1. *Admissibility of amendments (Articles 100(c) and 123(2) EPC)*

1.1 The Board considers that the Opposition Division's conclusions in points 2.1.1 to 2.1.3 of the impugned decision concerning the omission of the feature "… **the uniformity of appearance of the covering** nevertheless being ensured by the further particles (P1) dispersed homogenously in the mixture" are correct.

The respondent's arguments to the contrary, in particular that this omission would change the teaching of claim 1 of the application as originally filed, cannot hold for the following reasons.

1.2 The argument that the teaching of claim 1 of the application as originally filed would have been amended by this omission since claim 1 of the patent as granted

would now encompass processes for manufacturing coverings which result in a covering not having that uniformity of appearance is an assertion without substance.

1.2.1 First of all, when comparing the features of claim 1 of the patent as granted with the features of claim 1 of the application as originally filed it is evident that both features of the characterising portion of original claim 1, namely:
a) "forming the base layer (W) from a mixture having a homogenously dispersed phase of further particles (P1)", and
b) "distributing the decorative particles (P2) on the base layer (W) in a sparse arrangement, substantially preventing overlapping of the decorative particles (P2), the uniformity of appearance of the covering nevertheless being ensured by the further particles (P1) dispersed homogenously in the mixture"

have been shifted into the preamble of claim 1. Such a shift of features from the characterising portion to the preamble, which is commonly carried out in order to bring an independent claim into the correct two-part form with respect to the closest prior art, does, however, not change the teaching of the claim.

This also holds true in the present case wherein the shift of these features to the preamble additionally includes the deletion of redundant features, as will be explained as follows.

1.2.2 The teaching of original claim 1 in the light of the application as originally filed is to first form a

laminar base layer (W), which is formed from a mixture having a homogenously dispersed phase of further particles (P1) preferably in a base component which is not yet vulcanized (see page 3, fifth paragraph), said particles P1 preferably being vulcanised particles (see claim 6 and page 3, sixth paragraph) and then distributing the decorative particles (P2) on the base layer (W) in a sparse arrangement, substantially preventing overlapping of the decorative particles which preferably are from vulcanisable material (see claim 5 and page 4, second paragraph) and then fixing the decorative particles P2 to the base layer (W).

The feature now omitted actually specified that "the uniformity of appearance of the covering **nevertheless being ensured by the further particles (P1) dispersed homogenously in the mixture**".

This feature thus defined the result of the process after the step of distributing said decorative particles (P2) on the base layer (W) - which layer comprises the particles P1 in a homogeneous distribution (see also page 4, first paragraph) - in a sparse arrangement and defined that **nevertheless** (i.e. even after the distribution of said decorative particles (P2) on the base layer (W)) the uniformity of the covering is ensured by the further particles (P1) which have been homogenously dispersed in the mixture and thus in said layer (W). Thus the amount of the decorative particles (P2) has always to be selected such that a sparse arrangement relative to the amount of the visible further particles (P1) is achieved.

1.2.3 From the above considerations it is clear that the uniformity of the appearance of the covering is already inherently achieved by homogeneously distributing the particles P1 in the matrix.

Likewise it is evident that the statement in the quoted paragraph [0031] of the patent in suit (corresponding to page 6, fifth paragraph of the application as originally filed; emphasis added by the Board): **"The uniform distribution of the particles P1 gives rise to a phenomenon** which may be defined as **"visual homogenization" of the appearance of the covering**. This phenomenon renders the presence of regions in the covering in which the distribution of the particles P2 is particularly sparse practically imperceptible even upon observation at close range" does **not** deviate from this teaching but fully supports it.

The deletion during examination of these features therefore does not change the information regarding the invention.

1.2.4 The further argument concerning the required particle sizes and/or contrasting colours of the particles P1 and P2 now possibly being such that they are not visually discernible cannot hold either since claim 1 as originally filed did not contain any corresponding limiting features and the uniformity of appearance consequently was not restricted thereto.

Further, the invention does not make sense if on the one hand one distributes **decorative** particles P1 in the base layer and **decorative** particles P2 on the base layer but on the other hand would not want to be able

to benefit from their decorative function by making them indiscernible.

1.2.5 The respondent thus failed to show that the reasoning of the Opposition Division in its impugned decision is erroneous.

1.3 The Board therefore considers that this omission of these features from claim 1 of the patent as granted does not change the original teaching and therefore does not make the patent to extend beyond the content of the application as originally filed. Consequently, claim 1 of the patent as granted complies with Article 123(2) EPC.

2. *Admissibility of document D8 (Article 114(2) EPC)*

The Opposition Division in its impugned decision revoked the patent in suit. At the appeal proceedings according to the appellant's single request it is defended **only** in the form of the patent as granted (corresponding to the main request underlying the impugned decision; see points III and VII above).

2.1 Although the patent in suit has **not** been amended and is defended only in the form as granted the respondent submitted in its response to the statement of grounds of appeal the new document D8 and based a completely new line of argumentation of lack of inventive step on it.

D8 was therefore submitted more than 3 years **after** the expiry of the nine months period stipulated in Article 99(1) EPC. Furthermore, in this response the

respondent has also **not** given a single argument why document D8 should be introduced into the proceedings at the appeal stage, let alone that it would represent a reaction to the impugned decision.

2.2 The Board considers that the opposition-appeal proceedings in this respect are **not** a continuation of the opposition proceedings with other means and the filing of D8 is not necessitated by any of the issues discussed and dealt with in the impugned decision (see Case Law of the Boards of Appeal of the European Patent Office, 6th edition 2010, section VII.E.1).

2.3 Furthermore, D8 is in any case considered **not** to be more relevant than the documents D1 and D5 which both already disclose the problem of veining of unvulcanised particles/granules and the use of vulcanised particles/granules to solve this.

2.4 Therefore the Board, in exercising its discretion in accordance with Article 12(4) RPBA, decides **not** to admit the new document D8 into the appeal proceedings.

3. *Novelty (Article 54 EPC)*

3.1 Concerning the issue of novelty the Board considers that the respondent has **not** demonstrated that the impugned decision is erroneous in this respect.

To the contrary, the Board considers that the respondent combines different parts of the specification of D1 relating to different (specific) and/or general embodiments in order to - allegedly -

arrive at the subject-matter defined in claim 1 of the patent as granted.

3.2 First of all, the Board concurs with the Opposition Division in that the process according to figure 3 of D1 does **not** result in a **homogenous dispersion** of the granules 8 (which have a contrasting colour with respect to the colour of the base layer formed by granules 5) **in the base layer** 5.

3.2.1 This is due to the fact that according to the embodiment of figure 3 the rubber granules 5 are centrically sprinkled into the nip (or gap) between the two rolls 6 of the calender while the rubber granules 8 are fed into the nip offset to the second roll so that they end up in the upper surface of the final product. The thereby resulting structure of the two granulates is compacted in said calender to form an unvulcanised pore-free web 1 (see figure 3 and column 5, lines 20 to 40). D1 explicitly states that during said compaction step said eccentrically fed particles 8 are integrated into the web 1 **without considerable change of position** in the web (see column 5, lines 41 to 48).

Rubber granules 2 are then distributed and fixed on the pore-free web 1 by vulcanising the resulting web in the vulcanising machine 9 including the vulcanising drum 12 (see figure 3 and claims 10 to 13; column 5, line 14 to column 6, line 11).

Figures 4 and 5 of D1 are considered **not** to correspond to the product obtained by the process according to figure 3 but **only** to a simple embodiment according to product claim 1 of D1 which requires only contrasting

coloured particles 2 embedded in a matrix of the web 1 having a first uniform colour (i.e. without any granules 8). These particles 2, however, cannot be considered to be homogeneously dispersed **in** the web since they are apparently more or less uniformly distributed **on** the web 1 and are thereafter pressed into the same, e.g. by a pair of rolls. Furthermore, these **unvulcanised** particles 2 (see point 3.3.1 below) do **not** correspond to the claimed vulcanised particles P1 but only to the claimed decorative particles P2.

3.2.2 Furthermore, according to the two - most general - independent process claims 10 and 13 of D1 (which correspond to the disclosure at column 2, line 66 to column 3, line 17) the granules 8 are to be incorporated only into the outside of web 1 and **not into the entire base layer**. This conclusion is in full agreement with the statement concerning the figure 3 embodiment at column 5, lines 41 to 48 that the eccentrically sprinkled granules are incorporated into the web without any considerable change in position which goes hand in hand with the disclosure that deliberately chosen patterns such as words or pictograms can be made by said process (see column 2, lines 21 to 23 and column 5, lines 48 to 53).

Process claim 10 for making the coverings of claims 1-9 states that the contrasting coloured granulate 8 is introduced into the homogeneously coloured web 1 ("… in eine homogen in einer ersten Farbe eingefärbte **Bahn** (1) aus Kautschuk ein kontrastfarbenes Granulat (8) aus Kautschuk eingebracht wird, das Partikel (2) umfaßt") which process is then more precisely defined in dependent claim 11. Claim 11 specifies that for forming

the web 1 the first granulate 5 is sprinkled into the nip (or gap) between the two contra-rotating rolls 6 of the calender and a second granulate 8 of contrasting colour is added and the thereby resulting filling is pore-free compacted while preventing blurring (or veining) of said granulate forming particles ("… indem zur Bildung der Bahn (1) ein homogen in einer ersten Farbe eingefärbtes 1. Granulat (5) aus Kautschuk von oben in den Spalt zwischen zwei gegenläufigen, um horizontale Achsen umlaufende Walzen (6) eingegeben und mit einem kontrastfarbenen 2. Granulat (8) versetzt wird und die so erhaltene Schüttung (7) in dem Spalt **unter Vermeidung einer gegenseitigen Durchmischung** der Farbgrenzen der die Granulate (5,8) bildenden Partikel porenfrei verdichtet wird …"), while independent claim 13 specifies that the granulate 8 of contrasting colour is sprinkled onto the rubber web having a first colour ("auf eine … Bahn (1) aus Kautschuk ein kontrastfarbenes Granulat (8) aus Kautschuk aufgestreut wird …").

Consequently, D1 does **not** aim to produce a web having said granules 8 **homogeneously distributed** in the base layer of granules 5 but aims to produce a uniform colour web which has the particles 2 only on the outside and in which the particles 2 can overlap with said granules 8 also being present in the outer surface (this is actually explicitly stated at column 2, lines 10 to 14).

3.2.3 The respondent's argument that a homogeneous mixing of the two granules 5 and 8 would take place after their feeding between the two counter rotating rolls of the calender cannot hold, either. This is due to the fact

that D1 teaches to feed the second granules 8 **eccentrically** into the calender nip so that, in view of the fact that blurring of these granule particles during the compaction step in the calender nip has to be prevented, mixing is not occurring. Otherwise the granules would be subjected to the shear forces which are explicitly to be prevented (see column 3, lines 12 to 14). This is also shown in the schematic figure 3, where apparently only the minimum amount necessary for forming the outer surface of the web is sprinkled on one side of the nip (see also point 3.2.2 above). Furthermore, D1 is silent that any mixing should take place in the space above the nip of the calender.

An embodiment where both granules 5 and 8 are centrically sprinkled into the nip is simply **not** disclosed in D1. The eccentric feeding of particles 8 is not a "preferred" embodiment, it is the essence of the invention of D1. Therefore there is **no** implicit teaching "*a contrario*" of a central feeding of particles 8.

It may be that there is a preferred embodiment with an "arbitrary" pattern for the particles 8 as they are fed into the nip of the rolls. However, this can at most lead to the implication of a "purposive" pattern, but not necessarily the implication of "no pattern, but a homogenous distribution". As the particles 8 for such a pattern are still only present in the outer layer of the web, there still is no homogeneous dispersion over the entire thickness of the web.

Finally the homogeneous distribution is a technical, not a mere "aesthetic" feature.

3.3 Secondly, taking account of the general disclosure concerning the production of the granulates of contrasting and homogeneous colour (see column 3, line 46 to column 4, line 25 and column 4, line 46 to column 5, line 19) and of the most general description of the process according to claims 10 and 13 (claim 10: "Granulat (8) aus Kautschuk … das Partikel (2) umfaßt … die **durch nachfolgende Vulkanisierung** bleibend festgelegt werden …", claim 13: "… Granulat (8) aus Kautschuk aufgestreut wird, das Partikel (2) mit Partikelsektionen (2.1) umfaßt … die Partikel (2) … **durch anschließende Vulkanisierung des Kautschuks** festgelegt werden") the Board considers that both the granulates 8 and 5 as well as the particles 2, which are comprised in granulate 8 (according to figure 2 they could also be comprised in uniformly coloured granulate 5 but this is clearly erroneous) are made of unvulcanised rubber.

3.3.1 This view takes account of the specified chosen extrusion temperature for making the rubber granulates of "below 100°C" and the disclosed vulcanising temperature of 160-190°C which indicate to the Board that the rubber granulates 5, 8 as well as the particles 2 are **unvulcanised** (see column 4, lines 3 to 14 in combination with column 3, lines 28 to 34). Thus the respondent's arguments to the contrary cannot hold.

3.3.2 According to D1 the rubber granulate may additionally contain waste material from the production process of said covering but there is no teaching how and into which of the(se) granulate(s) 5 and/or 8 (and/or 2 sprinkled by 10), this waste material for its re-use

shall be incorporated. Such waste material of the production process **could** be in the specific form of vulcanised rubber particles but without a specific mention this is still **not** a direct and unambiguous disclosure of vulcanised material. If it were at all vulcanised material, it would still lack a disclosure of this being used as only the granules 8.

Therefore also this argument cannot be accepted.

3.4 Thirdly, the Board - in contrast to the Opposition Division - is not able to derive, whether from the description of D1 in the context of figure 3 (see column 5, lines 54 to 64) or from said schematic figure 3 by itself, let alone conclude, that the particles 2 are applied by the sprinklers 10 in "a sparse arrangement". The description does not say so and the figure does not show it, nor is the claimed feature "substantially preventing overlapping" of these particles fulfilled.

This latter view is supported by the fact that it is possible and within the scope of the teaching of D1 that these particles **can** contact each other (see column 2, lines 10 to 14).

3.5 In view of the above, it turns out that the respondent combines a general part of the description (namely column 2, lines 15 to 20) with the very specific embodiment of figure 3 which combination, however, does **not** represent one single direct and unambiguous disclosure, as required by the longstanding case law of the Boards of Appeal (see Case Law of the Boards of Appeal of he European Patent Office, 6th edition 2010,

sections I.C.2.1 to I.C.2.3, referring e.g. to T 305/87, OJ EPO 1991, 429).

3.6 Taking account of the above, the subject-matter of process claim 1 of the patent as granted is considered to be novel over D1 since the three features:

a) the particles P1 are added to the mixture in the form of particles of vulcanized material, and
b) forming a laminar base layer (W) from a mixture containing a basic component having homogeneously dispersed therein a phase of particles P1;
c) distributing decorative particles P2 on the base layer (W) in a sparse arrangement

are **not** directly and unambiguously derivable from it.

3.7 The subject-matter of claim 1 of the patent as granted therefore complies with Article 54 EPC.

4. *Inventive step (Article 56 EPC)*

Taking proper account of the appellant's arguments concerning the disclosure of D1 and the correct application of the problem-solution approach for assessing inventive step (see Case Law of the Boards of Appeal of the European Patent Office, 6th edition, 2010, sections I.D.2 to I.D.3.5 and I.D.4.1 to I.D.5) the Board reaches the conclusion that the reasons of the impugned decision for lack of inventive step already cannot hold, for the following reasons.

4.1 The choice of the Opposition Division in its decision to start from the process of D1 cannot hold since the

basic approach of D1 - to provide a covering which incorporates the contrasting colour granules 8 only on the outside of the web - is different from the approach of the patent in suit which provides a covering in which a first type of particles is homogeneously dispersed within the web and wherein decorative particles are incorporated on the outside of the web.

4.2 The features a), b) and c) (see point 3.6 above), which distinguish the process of claim 1 of the patent as granted from the process according to D1, result in the following effects:

4.2.1 Feature a) ensures that the particles P1 retain a precise individuality during the mixing step (see patent in suit, paragraph [0017]), i.e. they do not blur or produce veins.

4.2.2 Feature b) provides a substantially uniform surface distribution of the particles P1 over the base layer, which automatically provides a uniform surface distribution on the outside (see patent in suit, paragraph [0019]).

4.2.3 Feature c) prevents or at least limits overlapping of the decorative particles P2 (see patent in suit, paragraphs [0006] and [0025]), so that their geometrical characteristics can continue to be appreciated.

4.2.4 From the above described effects it is clear that **all three features a) to c)** together determine the appearance of the covering which is obtained by the process according to claim 1 of the patent as granted.

The Board therefore considers that there is a **combinatorial technical effect** achieved by the three distinguishing features taken in combination and **not** a plurality of separate effects which would solve partial problems as considered in the impugned decision and as now argued by the respondent.

4.3 Taking account of these effects the Board therefore considers that the objective technical problem solved by the patent in suit is to avoid the presence of fairly extensive and, moreover, unpredictably distributed areas of the basic web substrate in which the number of decorative particles becomes extremely small or even zero, since such limited presence or even absence of decorative particles in such regions of the covering is considered undesirable by the user. It is not the less ambitiously defined problem of finding a mere alternative way of achieving the same effects as obtained in the method of D1, as determined in the impugned decision. Already for that reason the impugned decision is to be set aside.

4.4 As far as the additional arguments of the respondent are concerned, the Board finds as follows.

4.4.1 The problem as defined by the Board is - contrary to the respondent's arguments - clearly a technical problem since it is based on physical features of the covering which are obtained by carrying out the specific sequence of technical process steps of claim 1 and thus has a technical character (see Case Law of the Boards of Appeal of the European Patent Office, 6th edition 2010, section I.D.8.1.2).

Decision T 1001/02 (not published in OJ EPO) quoted by the respondent in this context is considered not to be relevant since it concerns a feature of a claim, namely the casing of a heating device, which by the deciding Board was considered to be primarily the result of creative work to improve the aesthetic appearance and the design of the heating device (see point 6.1 of the reasons) whereas in the present case the features in question cause a homogenisation effect on the visual appearance of the covering (see patent, paragraph [0031]).

4.4.2 Furthermore, from the very beginning this problem has been presented as the problem underlying the invention of the patent in suit (see the application as originally filed, page 2, second paragraph corresponding to the patent in suit, paragraph [0007]).

4.5 This technical problem is solved by the subject-matter of claim 1 of the patent as granted.

Contrary to the respondent's arguments this solution is not rendered obvious by a combination of the teachings of D1 and D5 for the following reasons.

4.5.1 First of all, D1 does **not** mention the problem underlying the patent in suit but aims to solve a totally different problem, namely to provide a process for producing a coloured covering which can totally re-use all waste material generated during said process (see column 1, lines 31 to 35) but surprisingly contains no teaching at all, how and where this waste material shall be incorporated during the production process (see point 3.3.2 above).

According to the general teaching of independent claim 10 of D1 the method of manufacturing a covering comprises incorporating into a homogeneously coloured web 1 made of rubber a granulate 8 having a contrasting colour, said granulate 8 comprising the particles 2, which comprise at least two different colours and which are fixed by vulcanisation. These particles are incorporated into the outside of web 1, i.e. they are **not** homogenously distributed **in** the web (see point 3.2.2 above) and said web 1 (made from **unvulcanised** rubber granulate 5 and 8) as well as said particles 2 are formed from unvulcanised rubber (see point 3.3.1 above).

4.5.2 Second, the person skilled in the art, when starting from the teaching of D1, would have to change the essential features of its method which includes introducing **unvulcanised** granules 8 into the **outer regions** of the web 1. The Board cannot see a reason for the person skilled in the art to do so.

Third, the skilled person would not have the problem with the method of D1 as defined by the respondent.

4.5.3 Insofar it is already questionable whether D1 - with its inhomogeneous distribution of the granules 8 only in the outer portions of the web, see point 3.2.3 - is actually the closest prior art document for the subject-matter of claim 1.

4.5.4 The problem of colour veining or blurring does not exist at all in D1 and therefore the person skilled in the art has no reason to look for a solution in the

prior art, in this case D5 (see page 5, second paragraph).

4.5.5 Furthermore, even if the person skilled in the art by chance would have selected only the granules 8 to be in form of vulcanised rubber he would not arrive at the subject-matter of claim 1. He would then still have to see a problem with the introduction of these granules into the nip of the two rolls. Such a two-step approach to inventive step as entertained by the respondent, is in the opinion of the Board an indication of an *ex-post-facto* approach.

The skilled person will not see this as a problem. If the granules 8 are added in the form of vulcanised particles, they in any case will retain their precise individuality in the calendering process described in D1. But also the unvulcanised granules 8 retain their precise individuality in the pore-free compacted web after the calendering step (see column 2, line 66 to column 3, line 17 of D1).

4.5.6 Consequently, even if the person skilled in the art **could** combine the teaching of D1 with that of D5 he **would** not do so. The Board considers that the teaching of D5 is incompatible with the aims of D1.

4.5.7 The respondent did not submit any further arguments on obviousness starting from a different document.

4.6 Since the impugned decision has to be set aside (see point 4.3) and taking account of the above further arguments by the appellant and respondent the Board considers that the ground of opposition under

Article 100(a) EPC, lack of inventive step, cannot hold against the subject-matter of claim 1 of the patent as granted.

**Order**

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

1. The decision under appeal is set aside.

2. The patent is maintained as granted.

The Registrar: The Chairman:

E. Görgmaier H. Meinders