Datasheet for the decision of 14 February 2012

Case Number: T 0091/09 - 3.3.09
Application Number: 99309273.3
Publication Number: 1008620
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Language of the proceedings: EN
Title of invention: Chemically embossed metallocene polyethylene foam
Patentee: Armstrong World Industries, Inc.
Opponent: Tarkett SAS
Headword: -
Relevant legal provisions: EPC Art. 56, 83
Keyword: "Sufficiency of disclosure: Main - first auxiliary requests (no); second auxiliary request (yes)"
"Inventive step: second auxiliary request (yes)"
Decisions cited: -
Catchword: -
Case Number: T 0091/09 - 3.3.09

DECISION of the Technical Board of Appeal 3.3.09 of 14 February 2012

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Composition of the Board:
Chairman: W. Sieber
Members: W. Ehrenreich
K. Garnett
Summary of Facts and Submissions

I. Mention of the grant of European patent No. 1 008 620 in respect of European application No. 99 309 273.3, filed on 22 November 1999 in the name of Armstrong World Industries, Inc., was announced on 8 March 2006 in Bulletin 2006/10.

The patent was granted with 13 claims, claims 1, 2 and 13 reading as follows:

"1. A foamable resin composition comprising a metallocene polyethylene, a blowing agent and a blowing agent inhibitor, the inhibitor being a compound having the general formula

\[
\begin{align*}
\text{R} & \quad \text{N} \quad \text{N} \\
\text{H}_2\text{C} & \quad \text{N} \quad \text{R}_1 \\
\text{R}_2
\end{align*}
\]

or

\[
\begin{align*}
\text{N} & \quad \text{N} \\
\text{H}_2\text{C} & \quad \text{N} \quad \text{R}_1 \\
\text{R}_2
\end{align*}
\]
wherein R is hydrogen, one or more aliphatic moieties containing up to 20 carbon atoms, one or more cycloaliphatic moieties containing from 3 to 20 carbon atoms, or one or more aryl or substituted aryl groups containing from 6 to 30 carbon atoms, R₁ and R₂ are the same or different and each is an aliphatic moiety containing from 2 to 20 carbon atoms, a cycloaliphatic moiety containing from 3 to 20 carbon atoms or an aryl or substituted aryl moiety containing from 6 to 30 atoms."

"2. The composition as claimed in claim 1, further comprising two blowing agent activators."

"13. A surface covering comprising the foamable resin composition of any one of the preceding claims, wherein the foamable resin has been blown and a portion of the blowing agent has been inhibited."

Claims 3 to 12 were dependent claims.

II. An opposition against the patent was filed by

_Tarkett SAS_ on 7 December 2006.

The opponent requested revocation of the patent on the grounds of Articles 100(a) EPC (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC. In support of its objections under Article 100(a) EPC the opponent cited a number of documents, including

D2 US-A 5 441 563
D3 EP-A 0 780 207
D4 US-A 4 407 882
III. With its decision announced orally on 16 September 2008 and issued in writing on 10 October 2008 the opposition division maintained the patent in amended form on the basis of the set of claims according to the first auxiliary request filed during the oral proceedings. The claims as granted (main request) were considered not to be allowable because of non-compliance with Article 123(2) EPC.

The claims according to the first auxiliary request (as allowed by the opposition division) corresponded to the granted claims, except for (a) the incorporation of the feature into dependent claim 2 that the blowing agent is a nitrogen-containing blowing agent and (b) a change of the back-reference in some claims. These amendments were considered to meet the requirements of Articles 84, 123(2) and (3) EPC.

As to sufficiency of disclosure the opposition division considered that the objections raised by the opponent in this respect were either objections relevant under Article 84 EPC only, were not based on sufficient evidence or were refuted by the results of the examples and comparative examples in the patent specification.

The opposition division considered the claimed subject-matter novel over D2 in that this document was silent about metallocene polyethylene (MPE). In any case, the novelty objection against the claims as allowed by the opposition division had been withdrawn by the opponent in the oral proceedings.
Concerning inventive step the opposition division considered D7 the closest prior art and identified the problem to be solved as the provision of a blowing agent inhibitor which is soluble in a non-polar printing ink and which has a high penetration rate into MPE for producing chemical embossing. The opposition division held that neither D4 nor D5, although they disclosed the substituted triazole inhibitors according to claim 1, contained any reference as regards the compatibility of these inhibitors with metallocene polyolefins. Hence, D7 in combination with D4 or D5 did not render the solution to the problem obvious.

IV. Notice of appeal against the decision was filed by the opponent (hereinafter: appellant) on 18 December 2008. The prescribed fee was paid on the same day. The statement of the grounds of appeal was received on 20 February 2009.

The appellant maintained its objections of insufficiency of disclosure under Article 100(b) EPC and of lack of inventive step under Article 100(a) EPC.

V. In response to the appellant's grounds of appeal the patent proprietor (hereinafter: respondent) requested with its letter dated 16 July 2009 that the appeal be dismissed, alternatively that the patent be maintained on the basis of the first or second auxiliary requests submitted with this letter.

VI. In a communication issued on 7 June 2011 the board gave its provisional observations on the opposition grounds
of insufficiency of disclosure and lack of inventive step.

VII. Oral proceedings before the board were held on 21 July 2011 during which the respondent requested that the patent be maintained on the basis of the first or second auxiliary requests filed with the letter dated 16 July 2009.

In these oral proceedings the board expressed its doubts whether the claimed invention could be carried out using the claimed foamable composition over the whole scope of the claim because claims 1 of the above requests embraced a homogeneous mixture of the MPE, the blowing agent, the two activators and the inhibitor. It was the board's view that such a homogeneous composition was not capable of realizing the concept of the invention as disclosed in the patent specification to its whole context, namely to obtain chemical embossing, something which requires inhibition only in certain selected areas of a foamed MPE surface covering.

After a discussion of this issue the proceedings were ordered to be continued in writing with the following timetable:

(a) The respondent to file any further submissions and requests within two months of the date of the oral proceedings;

(b) The appellant to file any submissions and requests in answer thereto within two months of receipt of the respondent's submissions.

With a summons dated 27 July 2011 the parties were summoned to second oral proceedings on 14 February 2012.
VIII. With its letter dated 21 September 2011 the respondent maintained the first and second auxiliary requests filed with the letter dated 16 July 2009 as its main request and first auxiliary request respectively and filed new second to fifth auxiliary requests. With the letter dated 16 December 2011 new sixth to tenth auxiliary requests were filed.

IX. In the second oral proceedings the respondent made its seventh auxiliary request its second auxiliary request and submitted an amended description adapted to this request.

Claim 1 of the main and the first auxiliary request is directed to a foamable composition comprising a metallocene polyethylene, a nitrogen-containing blowing agent, two blowing agent activators and a blowing agent inhibitor as defined by the two alternative formulae referred to in granted claim 1 (see point I above) and thus far correspond to the claims discussed in the first oral proceedings. Claim 1 of the first auxiliary request differs from claim 1 of the main request only in that the composition ratio of the first activator to the second activator is defined to be between 2:1 and 1:2 by weight.

Claim 1 of the second auxiliary request (former seventh auxiliary request) is essentially derived from a combination of granted claim 13 with granted claims 1 and 2. As distinct from the main request, the subject-matter of the second auxiliary request is now concerned with a surface covering comprising the composition defined in claim 1 of the main request and additionally
indicates that the foamable resin has been blown and a portion of the blowing agent has been inhibited.

X. The appellant's arguments provided in writing and orally may be summarized as follows:

Sufficiency of disclosure

(a) Main request, First auxiliary request

(i) Claims 1 of both requests are directed to a foamable composition including the MPE, the activated blowing agent and the inhibitor as a homogeneous mixture. This implies that a global and uniform inhibition of the highly activated blowing agent will take place over the whole composition during its foaming. This contravenes the concept underlying the patent which seeks to obtain a foamed textured surface via a local inhibition at certain areas of the foamed MPE surface.

(ii) Claim 1 requires the presence of two non-specified blowing agent activators in combination with a nitrogen-containing blowing agent. According to examples 1, 2, 3 and 4, however, at least three activators, namely zinc oxide, urea (or activator other than urea - see example 4) and zinc stearate are used. Furthermore, these activators are only applied in combination with azodicarbonamide as blowing agent. It is not credible that sufficient expansion of the MPE can be obtained with only two blowing agent activators and that the above
activators can activate any nitrogen-containing blowing agent other than azodicarbonamide.

(iii) The two inhibitor formulae of claim 1 embrace a vast number of compounds from which only a few are used for carrying out the invention. The suitability of all inhibitors embraced by the formulae in combination with any nitrogen-containing blowing agent is therefore questionable.

(iv) In the examples, expansion of the MPE is exclusively carried out in the presence of peroxide cross-linkers. This essential requirement of peroxide-crosslinking is however not a feature of the claims.

In the light of the above, the skilled person could therefore not carry out the invention, contrary to the requirements of Article 83 EPC.

(b) Second auxiliary request (former seventh auxiliary request)

(i) Claim 1 is concerned with a surface covering which, however, comprises the same foamable resin composition as that according to claim 1 of the main request, namely a homogeneous mixture of MPE, a nitrogen-containing blowing agent, two activators and an inhibitor. The situation for this request is therefore the same as for the main and first auxiliary requests under point (i) above.
(ii) to (iv)
The same objections raised under points (ii) to iv) above also apply to claim 1 of the second auxiliary request.

Inventive step

(i) D7 as closest prior art in combination with D4 and/or D5

The principle underlying the invention, namely to provide a chemically embossed surface on a polyolefin (MPE)-based floor covering by expanding the MPE with an activated azodicarbonamide blowing agent and to inhibit the activated blowing agent by applying a benzotriazole inhibitor ink on certain areas of the foamable surface, was described on page 14 of D7.

The claimed subject-matter differed therefrom by the use of a specific triazole inhibitor. Triazole compounds according to the first formula in claim 1 were already known from D5. In column 3 lines 11 to 15 of this document it was disclosed that such compounds were useful as inhibitors in printing inks for use in the production of textured foam resin materials. Reference was made to D4 which was related to chemical embossing and disclosed the use of substituted benzotriazole compounds as inhibitors in printing ink compositions which could be applied to foamable polymeric surfaces. Polyethylene was disclosed in a list of polymers in column 3, line 44. Thus, a
combination of D7 with D4 and/or D5 would lead the skilled person to the claimed invention.

(ii) D7 in combination with D2

Likewise, D2 disclosed the use of substituted benzotriazole derivatives, partially falling under the first formula of claim 1 in printing inks, for use in producing textured foamed plastic surfaces. Inter alia, polyethylene was mentioned as a foamable polymeric material in a list in column 7, lines 41 to 53. The claimed subject-matter was therefore obvious also from a combination of D7 with D2.

(iii) D3 as closest prior art in combination with D4 and/or D5 (not pursued in the oral proceedings)

It was disclosed in D3 that the surface of MPE layers foamed with a blowing agent can be embossed with an inhibitor/accelerator system (claim 6; page 5, lines 43/44). It was therefore obvious for a skilled person to apply the printing inks described in D4 and D5 as an inhibitor system for embossing foamed MPE surfaces according to D3.

XI. The respondent's arguments were as follows:

Sufficiency of disclosure

It would not be a problem for a skilled person to provide a foamable composition comprising MPE, a nitrogen-containing blowing agent, two activators and
an inhibitor as defined in claim 1 by mixing the components.

(a) Main request, first auxiliary request

(i) A skilled person reading the patent specification was aware of what was intended by the teaching of the patent. He would therefore interpret the claims in the light of the description of the patent specification. A certain inhomogeneity in the claimed composition in order to obtain chemical embossing at least at certain areas of the composition after it has been foamed, was therefore an implicit feature of claim 1. The skilled person would certainly also take into account claims 12 or 11, as the case might be, of the main or first auxiliary request, which related to a surface covering and which required inhibition of a portion of the blowing agent and therefore implied that a certain inhomogeneity of the composition had to be present.

(ii) As regards the appellant's objection that examples 1 to 4 required the presence of at least three specific activators which were used exclusively with azodicarbonamide, the respondent argued that no evidence had been provided that the invention could not be carried out with two activators and nitrogen-containing blowing agents other than azodicarbonamide, as embraced by claim 1.

(iii) Likewise, no proof existed that the formulae of claim 1 embraced blowing agent inhibitors with
which the desired inhibiting effect could not be achieved.

(iv) The appellant's objection that peroxide cross-linkers had to be present during foaming of the MPE composition was a new issue which was also not substantiated by sufficient evidence.

(b) Second auxiliary request

(i) The concept of the invention, namely to provide a surface covering having a chemically embossed surface by inhibiting a portion of the blowing agent during foaming a foamable MPE composition, was expressly indicated in claim 1 of the second auxiliary request. Therein, the skilled person was clearly instructed that he had to impose a certain inhomogeneity of the inhibitor concentration in the foamable composition in order to inhibit only a portion of the blowing agent.

(ii) to (iv)

The above arguments provided for the main- and first auxiliary request also applied here.

In view of the above the invention was sufficiently disclosed.

Inventive step

When starting from D7 as the closest prior art the essential difference of the claimed subject-matter vis à vis D7 was the use of a specifically substituted triazole inhibitor. Examples 7 and 8 in comparison with
comparative examples 12 and 13 showed that the inhibitor ink containing the alkyl/aryl-functional inhibitor specified in claim 1 not only provided good chemical embossing but also a good adhesion/penetration into the foamable MPE layer in comparison with a printing ink comprising a common benzotriazole inhibitor.

Therefore, the problem to be solved was seen in the achievement of a chemical embossing system providing a good chemical embossment of a foamed MPE surface combined with a better penetration of the inhibitor ink into the foamable MPE layer.

D5 was concerned with the provision of new N-substituted triazole compounds useful as metal deactivators in functional fluids (claim 1). This was a completely different technical field, which meant that D5 could not be combined with D7.

D4 was concerned with printing ink compositions for chemical embossing of foamed polymer surfaces, including triazole inhibitors partially falling under the first formula of claim 1. There was however no indication in D4 that these specific inhibitors had a better penetration into polymer layers than the other ones. Although polyethylene was disclosed column 3, line 44 of D4, it emerged from the whole passage when read in context that polyethylene was not mentioned by reference to its function of a foamable polymer but rather that it served as a coating material which was applied onto a fibrous support of PVC as preferred foamable polymer.
Also, D3 in combination with any other documents could not render the claimed invention obvious because there was no discussion of a blowing agent inhibitor in D3. The document only indicated in very general terms that it was possible to obtain chemical inhibition on foamed MPE surfaces, comparable with PVC-CV coverings, and that any kind of mechanical embossing was conceivable.

XII. The appellant requested that the decision under appeal be set aside and the patent be revoked.

XIII. The respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of the first or second auxiliary requests filed with the letter dated 16 July 2009 (main and first auxiliary requests respectively), alternatively on the basis of the seventh auxiliary request filed with the letter dated 16 December 2011 (second auxiliary request).

Reasons for the Decision

1. The appeal is admissible.

2. The amendments to the claims of the main, first and second auxiliary requests meet the requirements of Articles 84, 123(2) and (3) EPC. No objections in this respect were raised by the appellant.

Main request, First auxiliary request

Claim 1 of the main and first auxiliary requests relates to a foamable resin composition comprising a metallocene polyethylene (MPE), a nitrogen-containing
blowing agent, two blowing agent activators and a blowing agent inhibitor of two alternative chemical formulae. As distinct from the main request, claim 1 of the first auxiliary request defines a ratio of the first to the second blowing agent activator.

3. Sufficiency of disclosure

The question whether the claimed invention is sufficiently disclosed can be considered for these requests together.

Under Article 100(b) EPC a European patent must disclose an invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

The invention to which the patent relates is concerned with chemically embossed MPE surfaces. When considering the patent specification in its whole context it is immediately evident that such a chemical embossment on the MPE surface can be achieved when the activated blowing agent is inhibited (e.g. via a printing ink containing an inhibitor) on certain areas of the foamable MPE composition. From that it follows that the invention can only be carried out with a foamable composition which possesses a certain inhomogeneity, either because the inhibitor (which deactivates the blowing agent) is located on certain areas only of the composition or because the concentration of the inhibitor is higher in certain areas of the composition than others. This concept has therefore to be reflected in the claims.
This concept, however, is not reflected in claim 1 of the main and first auxiliary requests, which simply claim a composition comprising MPE, blowing agent, activators and the inhibitor. Such claims therefore embrace homogeneous mixtures for which chemical embossment is not possible because the activator is neutralized by the inhibitor over the whole composition. Hence, the skilled person cannot carry out the invention over the whole scope of the claim.

The respondent's argument that the skilled person would interpret the claim in the light of the description and therefore would be immediately aware of the need for a certain inhomogeneity of the claimed composition is not convincing because the claims of both requests unambiguously cover homogeneous, non-enabling compositions. This is all the more so, as the respondent has not provided any evidence that a homogeneous composition can provide chemical embossing.

From the above it follows that the invention claimed in claim 1 of the main and first auxiliary requests does not meet the requirements of Article 83 EPC. The main and first auxiliary requests are therefore not allowable. Hence, there is no need to consider novelty and inventive step of these requests.

**Second Auxiliary request**

Claim 1 reads as follows:

"1. A surface covering comprising a foamable resin composition, the foamable resin composition comprising a metallocene polyethylene, a nitrogen-containing
blowing agent, two blowing agent activators and a
blowing agent inhibitor, the inhibitor being a compound
having the general formula

\[
\begin{array}{c}
\text{R} \\
\text{H}_2\text{C} \cdot \text{N} \cdot \text{R}_1 \\
\text{H}_2\text{C} \cdot \text{N} \cdot \text{R}_2 \\
\end{array}
\]

or

\[
\begin{array}{c}
\text{H}_2\text{C} \cdot \text{N} \\
\text{H}_2\text{C} \cdot \text{N} \\
\end{array}
\]

wherein \( R \) is hydrogen, one or more aliphatic moieties
containing up to 20 carbon atoms, one or more
cycloaliphatic moieties containing from 3 to 20 carbon
atoms, or one or more aryl or substituted aryl groups
containing from 6 to 30 carbon atoms, \( R_1 \) and \( R_2 \) are the
same or different and each is an aliphatic moiety
containing from 2 to 20 carbon atoms, a cycloaliphatic
moiety containing from 3 to 20 carbon atoms or an aryl
or substituted aryl moiety containing from 6 to 30
atoms, wherein the foamable resin has been blown and a
portion of the blowing agent has been inhibited."
4. Sufficiency of disclosure

4.1 In contrast to claim 1 of the main and first auxiliary requests the claim now clearly indicates that the foamable resin has been blown and a portion of the blowing agent has been inhibited. The feature that "a portion of the blowing agent has been inhibited" clearly implies a certain inhomogeneity of the foamable composition and therefore reflects the concept of the invention to achieve chemical embossment of the surface covering by providing areas with a higher inhibitor concentration than in other areas.

With regard to this limitation, the board's conclusions in point 3.1 in respect of claims 1 of the main and first auxiliary requests do not apply for the second auxiliary request.

4.2 In point X above, the appellant raised further objections under Article 83 EPC. It was in particular argued that the invention was insufficiently disclosed because:

(ii) claim 1 allowed the presence of only two activators and any nitrogen-containing blowing agent in contrast to the examples which required at least three activators and using only azodicarbonamide;

(iii) the inhibitor formulae of claim 1 embraced a vast number of compounds, whereas an inhibitor activity was only shown in the patent for a few compounds selected from the formulae;
(iv) peroxide crosslinking was mandatory for the foaming process but was not a feature of the claim.

The board agrees with the respondent that these points were not substantiated by convincing evidence. The respondent's allegations in this respect are therefore not adequate as a challenge to sufficiency of disclosure.

4.3 The invention claimed in the claims of the second auxiliary request is therefore sufficiently disclosed and meets the requirements of Article 83 EPC.

5. Novelty

Novelty was not an issue in the appeal proceedings. The subject-matter of the second auxiliary request is indeed novel over the cited prior art because none of the cited documents discloses a surface covering comprising a foamable resin composition in which an MPE resin is combined with a triazole inhibitor as specified by the formulae in claim 1.

6. Inventive step

6.1 The invention relates to the making of chemically embossed MPE resin foams by using a co-activated blowing agent and an alkyl-functionalized triazole derivative as an inhibitor (paragraph [0001]). The invention is based on the concept that an inhibitor component for the blowing agent is applied to desired areas of the surface of a foamable resin composition in order to increase the decomposition temperature of the blowing agent in those areas, thereby reducing the gas
According to claim 1 a surface covering is claimed which comprises a foamable MPE resin composition, a co-activated nitrogen-containing blowing agent and an alkyl-functionalized inhibitor component, wherein the foamable resin has been blown and a portion of the blowing agent has been inhibited. In accordance with the concept of the invention, the feature that "a portion of the blowing agent has been inhibited" implies the localization of an inhibitor at certain areas of the surface of the composition.

6.2 In agreement with the parties, the board considers D7 representative of the closest prior art. This document discloses a foamed MPE-based floor covering wherein chemical embossing has been applied on its surface such that, during blowing of the resin with an activated chemical blowing agent (azodicarbonamide), foaming is inhibited by deactivating a portion of the blowing agent by the application of a benzotriazole inhibitor onto certain areas of the surface (D7, page 14, point 5 in conjunction with page 3, line 19 to page 4, line 4). D7 therefore discloses the principle underlying the invention.

6.3 The claimed surface covering differs from the surface covering of D7 by the use of a specified alkyl- or aryl-functional inhibitor compound.

6.4 The respondent saw the problem to be solved by the invention as being to achieve a textured MPE-based surface covering having good chemical embossment.
combined with a good penetration of the inhibitor into the MPE resin. As a solution to this problem the patent as amended proposes a surface covering comprising a foamable MPE resin composition which includes a system composed of an activated blowing agent and an inhibitor as defined in claim 1, wherein the resin has been blown and a portion of the blowing agent has been inhibited.

The experimental evidence in the patent specification shows that the use of the blowing agent inhibitors as defined in claim 1 not only provides good chemical embossing but also has a good penetration into the foamable MPE layer in comparison with a different benzotriazole inhibitor (Table 1, examples 7, 8 and comparative examples 12, 13). Thus, the board is satisfied that the above-defined technical problem is indeed the objective technical problem and has been plausibly solved by the features as defined in claim 1.

6.5 It remains to be decided whether, in view of the available prior art documents, it would have been obvious for the skilled person to solve the technical problem identified above by the means claimed.

6.5.1 D4 and D5 disclose triazole inhibitor compounds which partially fall within the chemical formula of claim 1. D5 however lies in a different technical field, and D4 only generally mentions polyethylene in a list of polymers, but does not qualify polyethylene as a foamable polymer. There is no disclosure in D4 and D5 that the inhibitor compounds defined therein are specifically suitable for MPE resins, let alone that they have good penetration into the polymer surface.
6.5.2 D3 indicates that MPE-based foamed floor coverings can be mechanically embossed (page 5, lines 43/44) but makes no reference to chemical embossing by the use of a triazole inhibitor.

6.5.3 D2 deals with inhibitors for chemical embossing which are defined by a broad general formula which partially embraces inhibitor compounds specified in present claim 1 (D2, column 3, line 28 to column 4, line 47) and inter alia cites polyethylene as foamable polymer (column 7, line 51). The document, however, is primarily concerned with blown PVC-based resins (column 7, lines 41 to 43). There is nothing in D2 which would induce the skilled person to use MPE as specific polyethylene and to select from the broad range of formulae the alkyl-functional inhibitors falling within claim 1 in order to solve the problem posed.

6.5.4 For the above reasons, a combination of D7 with one of D2 to D5 would not lead the skilled person to the invention.

6.5.5 As regards the appellant's line of argument starting from D3 as the closest prior art (not pursued in the oral proceedings) the board agrees with the respondent that D3, in combination with any other document could not render the claimed invention obvious because there is no discussion of a blowing agent inhibitor in D3. The document only indicates in very general terms that it is possible to obtain chemical inhibition on foamed MPE surfaces, comparable with PVC-CV coverings, or that some kind of mechanical embossing is conceivable.
6.6 The subject-matter of the second auxiliary request is therefore based on an inventive step.

7. For the reasons mentioned under points 4 to 6 the second auxiliary request is allowable. There is therefore no need to discuss the other requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of:

   (a) Claims 1 to 10 according to the seventh auxiliary request (now second auxiliary request) filed with the letter dated 16 December 2011; and
   (b) the amended description pages numbered 2 to 9 as filed during the oral proceedings.

The Registrar

The Chairman

G. Röhn

W. Sieber