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**Datasheet for the decision
of 27 January 2021**

Case Number: T 2193/18 - 3.3.03

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Language of the proceedings: EN

Title of invention:
BASE INTERLINING, METHODS FOR THEIR MANUFACTURE AND
APPLICATION THEREOF

Patent Proprietor:
Johns Manville

Opponent:
Politex Sas di Freudenberg Politex Srl.

Relevant legal provisions:
RPBA Art. 12(4)
EPC Art. 56
EPC R. 103(1)

Keyword:

Late-filed evidence - admitted (no)

Inventive step - Main request and first auxiliary request (no)

Substantial procedural violation - (no)

Decisions cited:

T 0494/99



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Case Number: T 2193/18 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 27 January 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 July 2018 concerning maintenance of the
European Patent No. 2231917 in amended form.**

Composition of the Board:

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

Summary of Facts and Submissions

I. The appeal by the opponent lies from the decision of the opposition division posted on 17 July 2018 concerning maintenance of European patent No. 2 231 917 in amended form on the basis of the auxiliary request filed with letter of 8 March 2018.

II. Claim 1 as granted read:

"1. A textile fabric which has been bonded with the binder system comprising:

a) 10 to 90 wt % (dry mass) of an aqueous dispersion of polymerisates based on conjugated aliphatic dienes and vinyl aromatic compounds

b) 90 to 10 wt % (dry mass) starch and

c) 0 to 10 wt % (dry mass) additives,

with the figures for the percentage by weight relating to the dry mass of the binder system, i.e. without water and said fabric being a nonwoven based on partially aromatic or fully aromatic polyesters."

III. The decision of the opposition division was based *inter alia*, on the following documents:

E1: US 4 055 694

E2: US 3 779 857

E3: WO 01/12343 A1

E4: US 6 034 005

E5: US 5 130 395

E6: EP 0 405 921 A1

E7: US 5 358 998

E9: US 5 525 414

E10: US 5 147 907

E11: US 4 109 056

E12: EP 0 021 693 A1

E13: Russell, C. R., "Industrial Use of Corn Starch",
58th Annual Meeting of the American Association of
Serial Chemists, 4 to 8 November 1973, pages 262-284

E16: Takamura. K., et al, "Non-wovens Application",
from "Polymer Dispersions and Their Industrial
Applications" (Chapter 10), Editors: Urban, Takamura,
2002, Wiley VCH Verlag GmbH & Co. KGaA , pages IV-XI,
XIII, XV-XVIII and 1-408

E17*: US 8 003 716

E19: US 3 485 776

E20: Experimental report of the patent proprietor filed
during the oral proceedings before the opposition
division.

- IV. The decision of the opposition division was based on the claims as granted as the main request and on the auxiliary request filed with letter of 8 March 2018. Claim 1 of the auxiliary request differed from claim 1 of the main request in that the term spunbonded had been added before nonwoven and characterized the type of fabric.
- V. The contested decision, as far as it is relevant to the present appeal, can be summarized as follows:
- The main request did not fulfil the requirements of Article 123(2) EPC.
 - Claim 1 of the auxiliary request was based on claims 23 and 24 of the application as originally filed. The auxiliary request met the requirements of Article 123(2) EPC and Article 84 EPC. Claim 1, claim 18 and claim 23 of the auxiliary request were also

sufficiently disclosed. Claim 1 of the auxiliary request was novel over E17* as that document did not disclose a textile fabric being spunbonded nonwoven based on partially or fully aromatic polyesters.

- As to inventive step, the examples of the patent in suit did not establish the presence of a technical effect. The objective problem was therefore the provision of an alternative textile fabric suitable as base interlining for coated sarking, roofing and sealing membranes.

- E4 which was a suitable starting point for the analysis of inventive step disclosed a nonwoven fabric which was adhesively bonded with a latex binder. Contrary to claim 1 of the auxiliary request, E4 did not disclose starch used in combination with the binder system and that the fabric was a spunbonded nonwoven. E4 did not suggest to add starch to the latex binder in order to improve the properties of said textile fibre let alone of a polyester spunbonded nonwoven. Such a combination was also not suggested by the teaching of documents E1-E3, E5-E7, E9-E11, E13 or E19. Claim 1 of the auxiliary request was therefore inventive over E4. The same conclusion was reached starting from E6 or E19.

VI. The opponent (appellant) filed an appeal against the decision of the opposition division. Document E22 was filed *inter alia* with the statement of grounds of appeal filed on 22 November 2018:

E22: INDA Nonwovens Glossary, 2002, issued by Association of the Nonwoven fabrics Industry

VII. With the rejoinder to the statement setting out the grounds of appeal filed on 28 March 2019 the patent proprietor (respondent) discussed the main request which corresponded to the auxiliary request underlying the contested decision and further discussed an auxiliary request 1 that was formally filed with letter of 23 October 2019.

Claim 1 of auxiliary request 1 differed from claim 1 of the main request in that the textile fabric was further characterized by the following wording "said binder system being applied to the textile fabric in an amount between 5 and 35 wt% of dry binder after drying in relation to the total weight of the raw textile fabric,".

Document E23, an experimental report referred to as Annex A by the respondent, was also filed with the reply to the statement of grounds of appeal.

VIII. With letter of 4 June 2019 the appellant submitted document E24 (CH 301828).

IX. Oral proceedings were held on 27 January 2021.

X. The appellant's arguments, insofar as relevant to the present decision, may be summarised as follows:

Admittance of E23

- E23 was only filed in appeal proceedings but that experimental report could and should have been introduced earlier into the proceedings, in particular with the reply to the notice of opposition in which the question of the relevance of example 1 of the patent in suit for the

inventive step assessment was raised for the first time. Also, E23 did not provide details regarding the components of the binder and the protocol used for the polymer preparation so that the experimental report was not reproducible. The appellant was thus not in the position to verify these results and eventually to prepare their own examples. E23 should thus not be admitted into the proceedings.

Main request - Inventive step

- Document E4 could be seen as the closest prior art. The object of E4 concerned a nonwoven fabric which was produced by adhesively bonding fibers with a latex binder wherein the fibers were preferably polyester fibers made from polyethylene terephthalate (PET). The latex binder was preferably prepared from conjugated diene monomers and vinyl substituted aromatic monomers, such as butadiene and styrene. According to E4, the fibers could be drawn and laid down directly onto a porous belt by air-laying, followed by bonding. Such a process, in which fibers were directly laid on a support and bonded, was a conventional spunbonding process that corresponded to that of claim 1 of the main request. The textile fabric of claim 1 of the main request differed therefore from that of E4 in that the binder system comprised starch in the specified quantity.

- The patent did not provide evidence that any effect was obtained by the addition of starch. The patent disclosed experimental data but only example 3, which related to a binder comprising Styrene Butadiene Rubber (SBR) and starch, was an

embodiment of operative claim 1. Examples 1, 2, 4 and 5 did not use binders comprising SBR and starch. In principle, example 1 with a binder comprising SBR but no starch, could provide a comparison to E4. The binder of example 1 however contained urea that was not present in the examples of E4. Urea was known to have an impact on the properties of the textile fabric. That example was thus not representative of the closest prior art E4. Furthermore, the patent in suit did not provide sufficient details about the components used in the binder system. Also, the patent in suit did not clearly identify the properties reported in the examples. The examples according to the patent in suit were thus not reproducible and did not provide a comparison to E4 as the closest prior art. Therefore, they did not provide evidence of a technical effect. The problem was thus the provision of further textile fabrics.

- Starting from E4 as the closest prior art, it was obvious to add starch in view of document E2. E2 disclosed latex compositions for adhesively bonding nonwoven textiles made from polyester fibers. The binder compositions comprised a polymer, preferably SBR, and starch. E2 was in the same technical field as the opposed patent, because it related to flooring applications. Thus, in order to solve the problem of providing merely an alternative textile fabric starting from E4, it was obvious to add starch to a latex composition for binding nonwovens in view of E2. It was clear for the skilled person that he could obtain an alternative textile fabric thereby.

- E2 summarized the common general knowledge about starch as an additive in latex binders for nonwoven substrates. Regarding the purpose of starch, E2 disclosed that in the past latex compositions could normally contain no more than 10-20 percent by weight starch. From that passage of E2 it was clear that the skilled person had an incentive to replace a part of a latex by a starch adhesive in order to save costs. Thus, E2 provided evidence that starch was a conventional additive for polymer latex binders, and even those based on SBR, for nonwoven substrates. For this reason alone, claim 1 was obvious in view of E4 in combination with E2.

- An inventive step could therefore not be acknowledged for claim 1 of the main request.

Auxiliary request 1 - Inventive step

- The arguments of inventive step outlined for the main request were equally valid for auxiliary request 1.

Reimbursement of the appeal fee

- The opposition division severely infringed the right to be heard of the opponent under Article 113 EPC. In section 6.3 of the contested decision, the opposition division defined the objective problem as "the provision of an alternative textile fabric suitable as base interlining for coated sarking, roofing and sealing membranes". However, this definition of the problem was neither proposed by the opponent, nor by the patent proprietor, nor by the opposition division throughout the written and oral proceedings. The opponent argued in the first-

instance proceedings consistently that the objective problem would merely be to provide an alternative textile fabric. In the written decision, the opposition division had defined the problem differently from the opponent and from the patent proprietor by including the limitation "suitable as base interlining for coated sarking, roofing and sealing membranes". The opposition division did not provide a hint to the parties that it would define the objective problem in this way without following the formulation of the opponent or the patent proprietor. In the preliminary opinion provided to the parties on 29 November 2017, the opposition division informed the parties that it would consider the problem as "to provide a bonded nonwoven fabric which can be used as base interlining using the state-of-the-art production equipment (with a good performance in tensile force), but having an improved heat dimensional stability (TDS)" (section 5.2). This problem was totally different from the problem defined later in section 6.3 of the written decision.

- The opponent could also not expect that the opposition division would define a different problem from that of the opponent and patent proprietor. Claim 1 was not restricted in any way to the applications defining the posed problem and it was obvious that the opposed patent did not provide evidence in the working examples of advantageous applications regarding coated sarking, roofing or sealing membranes. Therefore, it was totally obscure why the opposition division restricted the objective problem accordingly.

- The opposition division should have informed the parties at the latest during the oral proceedings that it intended to define the problem differently from the parties and from its own preliminary opinion. Since the opposition division failed to do so, the opponent had no chance to succeed with his argumentation regarding inventive step. The opponent did not know and could not know that the opposition division would unduly limit the relevant technical field to coated sarking, roofing and sealing membranes. All attempts of the opponent in the first-instance proceedings to convince the opposition division that the opposed patent was not based on an inventive step were useless. Thus, reimbursement of the appeal fee under Rule 103(1) EPC was justified due to a substantial procedural violation.

XI. The respondent's arguments, insofar as relevant to the present decision, may be summarised as follows:

Admittance of E23

- E23 was an experimental report (Annex A) showing that a binder completely based on component a) (100% SBR) displayed a good tensile force but did not have good thermal dimensional stability (TDS). E23 was filed in direct reply to the decision of the opposition division in which it was laid out for the first time that example 1 of the patent in suit did not represent the process of the closest prior art E4 because the binder according to example 1 contained 10 wt.-% urea while the binder according to example 20 of E4 did not contain urea. That ultimately resulted in an effect not being recognized over E4. In that regard, E23 provided a

comparison with the binder of E4 that was more relevant than the process of E4 as such. Furthermore, E23 had been filed 2 years in advance of the oral proceedings so that it left enough time to react to the appellant. For these reasons E23 should be admitted into the proceedings.

Main request - Inventive step

- E4 was the closest prior art since it related to the technical field of binder consolidated nonwoven, including polyester nonwoven, and to SBR binder for such consolidation.
- E4 differed from claim 1 of the patent in suit in that E4 did not teach that starch in a defined quantity was used in combination with SBR and that the nonwoven, including polyester nonwoven, were spunbonded nonwoven based on partially aromatic or fully aromatic polyesters.
- The skilled worker also learned from examples 5 and 4, that satisfactory TDS could not be "preserved" when replacing starch by acrylate latex. Based on these findings it was totally surprising that mixing starch with component a) caused good performance in both tensile force and TDS performance. Therefore, the problem solved should be formulated as to provide a textile fabric being a spunbonded nonwoven based on partially aromatic or fully aromatic polyester having an improved balance of both tensile force and TDS performance.
- The teaching of E4 related to a textile nonwoven fabric which could be used for stiff and resilient fabrics, such as apparel interliners, whereas the

patent in suit related to base interliners for the manufacture of roofing membranes. Also, E22 showed that the air laying process used in E4 related to fibers and not to endless filaments as disclosed in the patent in suit. E16 did not show that spun-laying was necessarily the method of choice for providing nonwovens.

- Further, E4 neither suggested nor gave a hint to add starch to an SBR latex binder in order to improve the properties of textile fibers let alone of polyester spunbonded nonwovens. In that regard, E20 showed that the amount of starch included in the binder according to claim 1 of the main request led to an improvement of the TDS that was nowhere suggested. Therefore, the claims of the main request were based on an inventive step over E4.

- E2 did not represent the common general knowledge in the field of textile fabrics as disclosed in the patent in suit. E2 referred to latex compositions such as SBR, mixed with starch but its teaching actually concerned the use of Borax to improve curing. E2 did not teach that the use of a binder based on an SBR latex and starch improved the thermostability of bonded textile fabrics. In particular, the latex compositions according to E2 were used for laminating backings to (tufted) carpets which had nothing to do with the claimed textile fabric and did not motivate a skilled person to use such materials for the consolidation of polyester spunbonded nonwoven as in the patent in suit. Therefore, the claims of the main request were based on an inventive step over E4 in combination with E2.

- An inventive step should therefore be acknowledged.

Auxiliary request 1 - Inventive step

- The arguments of inventive step outlined for the main request were equally valid for auxiliary request 1.

Reimbursement of the appeal fee

- The respondent had no remarks with respect to the request for reimbursement of the appeal fee of the appellant.

XII. The appellant requested that the decision of the opposition division be set aside and that the patent be revoked. It was requested to admit E24 filed with letter of 4 June 2019 and not to admit E23 (Annex A) and auxiliary request 1 filed with letter of 23 October 2019 into the proceedings. Reimbursement of the appeal fee was also requested under Rule 103(1)(a) EPC.

XIII. The respondent requested that the appeal be dismissed or that the patent be maintained in amended form on the basis of auxiliary request 1 filed with letter of 23 October 2019. The respondent also requested to admit document E23 and not to admit E24 into the proceedings.

Reasons for the Decision

1. Admittance of E23 and E24

1.1 The statement of grounds of appeal of the appellant was filed on 22 November 2018 and the reply thereto of the respondent was filed on 28 March 2019. As the statement of grounds of appeal was filed before the entry into

force of the RPBA 2020 and the reply to it was filed in due time Article 12(4) RPBA 2007 applies by virtue of the transitional provisions in Article 25(2) RPBA 2020 to both submissions and thus also to any document, such as E23, filed therewith.

- 1.2 Document E23 (Annex A) is in the form of a table showing what appears to be the compositions of two binders and some selected properties of corresponding textile fabrics. The composition of the first binder does not appear to contain a urea resin.

- 1.3 The respondent argued that E23 was filed to address the reasoning of the opposition division laying out that the patent in suit did not contain an example of a binder composition representing the closest prior art E4 in particular because the binder of example 1 in the patent in suit contained urea which was not present in E4 (2nd and 3rd paragraphs of page 9 of the contested decision). This led the opposition division to conclude that the examples of the patent in suit did not show the presence of improved properties compared to a composition comprising SBR alone as latex binder as in E4. The respondent further argued that the conclusion of the opposition division, which was that the patent in suit did not show that the addition of starch in the binder resulted in an effect over E4, was laid out for the first time in the contested decision. E23 therefore should be admitted into the proceedings.

- 1.4 Contrary to the assertion of the respondent, section IV of the notice of opposition already contained in the fourth paragraph on page 6 of section 4.2 the argument that a comparison between example 3 and example 1 of the patent in suit could not show an effect resulting from the use of starch in the binder because the

composition of example 1 additionally comprised 10% urea which was not present in the binder of example 3. It was there also concluded that any observed difference in the properties of the resulting textiles could thus not be solely attributed to the presence of starch. Essentially the same argument was also made in the notice of opposition in the context of the assessment of inventive step in view of E4 as closest prior art (last paragraph of page 10 in section 4.3.4 beginning on page 9), which led the opponent, now appellant, to redefine the problem over E4 as the provision of an alternative textile fabric.

- 1.5 It is apparent that the objection concerning the lack of a comparative example representing E4 in the patent in suit as a result of example 1 containing urea while example 3 did not was raised at the very outset of the opposition procedure by the opponent. That issue was addressed but rejected by the patent proprietor in their reply to the notice of opposition dated 18 July 2017 (section A.III.5, second paragraph on page 7).
- 1.6 It is with the notice of opposition and not in the decision of the opposition division, contrary to the argument of the respondent in appeal, that the patent proprietor was made aware of the objection against the relevance of the examples of the patent in suit in view of E4 as closest prior art.
- 1.7 Under these circumstances the respondent not only could, but should have filed any additional experimental data, such as those in E23, in opposition proceedings if it intended to counter the objection by means of experimental evidence.

- 1.8 On this basis, the Board finds it appropriate to make use of its power under Article 12(4) RPBA 2007 to hold E23 inadmissible.
- 1.9 E24 was submitted by the appellant with letter of 4 June 2019 in support of an additional objection of lack of inventive step against claim 1 of the main request. In view of the conclusion reached by the Board on inventive step of the main request (section 2 of the present decision), there was no need to decide on the admittance of E24 into the proceedings.

Main request

2. Inventive step

- 2.1 The patent in suit concerns consolidated textile fabrics (paragraph 1) wherein the binder system is based on an aqueous dispersion of polymerisates based on conjugated aliphatic dienes and vinyl aromatic compounds and contains starch (paragraph 9). E4 concerns nonwoven fabrics that have properties that render them useful for textiles (column 1, lines 6-13 and 54-59) and the nonwoven fabrics of E4 are chemically bonded by an essentially formaldehyde free latex binder (column 1, lines 5-10). E4 thus is in the same general technical field as the patent in suit and uses a binder that belongs to the category of latex binders, as in the patent in suit. E4 was chosen as the closest prior art with respect to operative claim 1 in the contested decision and that choice was not disputed in appeal since both parties considered that that document represented the closest prior art. The Board does not see any reason to deviate from that view.

- 2.2 An appropriate starting point within E4 is one of the nonwoven fabrics disclosed in the general description of the examples in column 6, line 64 to column 8, line 58 as proposed in the preliminary opinion of the Board, section 11.7. In that passage, a binder based on a styrene-butadiene latex (column 7, line 31, Table 2) was applied to selected nonwoven non-cellulose fibers (column 8, lines 1-11). The binder described in that passage did not contain starch. The passage in column 8, lines 22-57, which also refers to Figure 1, discloses the use of that binder on a nonwoven non-cellulose polyester fabric. However, that passage does not disclose the fabric being a spunbonded nonwoven based on partially aromatic or fully aromatic polyester. Operative claim 1 thus differs from that passage of E4 in the presence of 10-90 wt.-% starch in the binder and the use of spunbonded nonwoven based on partially aromatic or fully aromatic polyester.
- 2.3 The problem solved in view of E4 was defined in the contested decision as the provision of alternative textile fabrics suitable as base interlining for coated sarking, roofing and sealing membranes. The respondent considered in appeal that the problem solved over E4 was to provide spunbonded nonwoven based on partially aromatic or fully aromatic polyesters having an improved balance of tensile force and heat (thermal) dimensional stability (indicated as TDS; see section A.IV, 4th paragraph on page 14 of the reply to the statement of grounds of appeal). The respondent based that formulation of the problem on the examples of the patent in suit which would show that textile fabrics according to operative claim 1 had a very good TDS of maximally 1.3% in longitudinal direction and -1.4% in cross direction, while the tensile force remained acceptable (see Example 3 of the specification),

compared to the textile fabrics of examples 1, 2, 4 and 5.

2.4 The accuracy of the description of the examples and comparative examples of the patent in suit was objected at the outset of the appeal proceedings (section 4.4 of the statement of grounds of appeal). In that regard, in order to be relevant for demonstrating that a technical improvement is achieved in comparison with the closest state of the art, any comparative test presented for that purpose must be reproducible on the basis of the information thus provided, thereby rendering the results of such tests directly verifiable by third parties (see e.g. T 494/99 of 19 February 2003, point 5.2 of the reasons). That requirement implies, in particular, that the procedure to perform the test relies on qualitative and quantitative information enabling the person skilled in the art to reliably and validly reproduce it. Vague and imprecise operating instructions render the test inappropriate for that purpose and thus irrelevant.

2.5 In the present case, little to no information is provided about the essential components of the binder system used to bond the nonwoven based polyethylene terephthalate of the examples of the patent in suit. The "SBR-dispersion" and the "starch", which define the binder system of the textile fabric according to operative claim 1 but also the "urea resin" and the "acrylate dispersion" used in examples 1-5 are not further identified by their components nor appear to be commercially available according to the information provided in the patent in suit.

2.6 There is also no information in the rest of the description that would have allowed the skilled reader

to identify the components of the binder system used in the examples. In particular, the conjugated aliphatic diene component a) of the binder system is generally disclosed in paragraph 21 and the vinyl aromatic compound b) in paragraph 22 of the patent in suit but these passages are unspecific with regard to the identities of these components in the examples. Also, a large range of starches that can be used in the binder system of the patent in suit is disclosed in paragraphs 32-36, but there is no indication of which starch was used in the examples. Furthermore, there is no disclosure of the method used to bond the nonwoven based polyethylene terephthalate in the examples (the passage in paragraphs 67-70 indicates that a variety of methods can be used). The skilled reader of the patent in suit is thus kept in the dark as to how to reproduce the examples allegedly showing improved properties of the produced textile fabrics.

2.7 The examples of the patent in suit can thus not be reproduced on the basis of the information contained therein. Already in view of this example 1 of the patent in suit as it is disclosed in paragraph 116 cannot be seen as a fair representation of the closest prior art E4 and in particular its examples. The same conclusion applies to the examples provided in E20 which were briefly cited in appeal by both parties since the information provided in E20 about the components and method used to produce the tested textile fabrics lacks the same details as in the patent in suit.

2.8 Furthermore, the examples of the patent in suit cover only one amount of each components of the binder system (40 wt.-% of SBR-dispersion and 60 wt.-% of starch) whereas operative claim 1 defines broad ranges of 10-90

wt.-% of an aqueous dispersion of polymerisate a) and 90-10 wt.-% of starch. It could thus not be reasonably concluded on the basis of the examples either that any alleged effect would be present over the whole scope of the ranges in components a) and b) of the binder as defined in operative claim 1.

2.9 Also, the compositions of the examples 1 and 2 of the patent in suit comprise 10 wt.-% urea which is known from E2 (column 1, lines 58/59) to have a significant effect on the properties of the produced bonded textile fabric in that it can function as a plasticizer when used in a latex composition, ultimately reducing the stiffness of the fabric. Since urea is not contained in the composition of example 3 of the patent in suit, which is the only example according to operative claim 1, any difference of the results of examples 1 and 3 cannot be attributed to the presence of starch alone, which would require that all components and amounts except for the starch additive are identical.

2.10 Besides, the examples of the patent in suit do not provide any comparison that could establish any effect caused by the nature of the fabric being a spunbonded nonwoven based on partially aromatic or fully aromatic polyesters as defined in operative claim 1 over other types of fabrics. In that regard, it cannot be concluded that the choice of the fabric in operative claim 1 is linked to any effect going beyond what was known from the common general knowledge in the context of bonded textile fabrics.

2.11 Thus, in the absence of evidence that the distinguishing features of operative claim 1 over the closest prior art E4, alone or in combination result in an effect over E4, the problem that can be formulated

can only be seen as the provision of alternative textile fabrics. The closest prior art E4 does not limit the applications of the bonded nonwoven fabrics produced with latex binder it discloses. In that regard, there is no reason to assume that the bonded nonwoven fabrics according to E4 would not be applicable as base interlining for coated sarking, roofing and sealing membranes as well. In any case there is also no limitation in claim 1 related to the suitability for specific uses. There is therefore also no reason to define the problem solved over E4 by way of the applications of the textile fabrics to any specific use, contrary to what was done in the contested decision.

2.12 The skilled person, looking for alternative textile fabrics, would consider variations of the closest prior art E4 on the basis of what was already known, taking into account the common general knowledge in the field and the knowledge made available in the prior art.

2.12.1 The examples of the closest prior art E4 do not explicitly disclose that the fabric used was a nonwoven based on partially aromatic or fully aromatic polyesters. In that regard, the passage in column 8, lines 1-8 discloses that the latex binder was applied to "selected nonwoven non-cellulose fibers of a type as previously described using most any suitable method well known in the art such as saturation, immersion or spraying". The part of E4 referring to nonwoven non-cellulose fibers extends from column 3, line 57 to column 4, line 19. In that passage, E4 discloses that the nonwoven non-cellulose fibers may be glass fibers or fibers made from high polymers. Among the high polymers, polyester fibers including any long chain synthetic polymer composed of at least 85% by weight of

an ester of a dihydric alcohol and terephthalic acid such as polyethylene terephthalate are mentioned (column 3, lines 64-67). The use of polyethylene terephthalate fibers as nonwoven non-cellulose fibers, which are according to operative claim 1, is also suggested in claim 12 of E4.

2.12.2 E4 further discloses that the non-cellulose fibers may be of most any suitable size and randomly arranged to most any suitable thickness depending upon the desired end use of the nonwoven fabric (column 4, lines 10-12). There is with respect to the preparation of the textile fabric from the nonwoven non-cellulose fibers no particular limitation in E4, the part concerning the background of the invention in E4 describing further that a nonwoven fabric is a preformed web or mat of fibers laid down mechanically which may be deposited in a random manner or oriented primarily in one direction and that the spun fibers, which may be drawn, can be laid down directly onto a porous belt by carding, air-laying or wet-laying (column 1, lines 16-25). That passage of E4 concerns the common general knowledge in the field of nonwoven fabrics and it refers to the process of spun-laying the fibers, which is a known and commonly used process in that art as also apparent from section 10.2.1 and Figure 10-6 on page 271 of E16 and the passage on page 9, lines 10-20 of E12. Since E4 does not limit the nonwoven fabrics nor their preparation process, apart from the fact that the fibers upon which the fabrics are based must be non-cellulosic, a skilled person addressing the problem posed of providing further textile fabrics would have used any method of preparation of the nonwoven fabrics including the spun-laying technique.

2.12.3 The use of starch is not mentioned in E4. However, starch as additive for binder systems for nonwoven fabrics was known in the prior art, as apparent from E2 (column 1, lines 39-46). In particular E2 discloses the use of starch in an elastomer latex-based composition suited for the lamination of textiles nonwoven fabrics (column 1, lines 13-15; claim 1). In E2 it is specified that the starch used must be one which does not result in excessively high viscosity when mixed with the aqueous latex and inorganic filler that are also part of the binder (column 3, lines 32-35) and that up to 40 parts by weight per 100 parts by weight of dry polymer solids of a ternary extender consisting of granular, cold water-insoluble starch, urea and borax can be used in the binder (claim 1). In that regard, urea and borax are not excluded from the binder system according to operative claim 1. In that context, example X of E2 and in particular table 8 of that document discloses the presence of 14.7 parts by weight starch in 100 parts by weight latex polymer which is a carboxylated butadiene/styrene latex (column 10, line 47). These amounts of latex and starch correspond to recalculated amounts of 74.96 wt.-% of latex and 11.01 wt.-% of starch which are both according to operative claim 1. While the binder system according to example X of E2 also contains additives such as borax decahydrate, urea, petroleum oil and sodium polyacrylate in a total, recalculated, amount of 14.09 wt.-%, which amount is formally outside the range of 0-10 wt.-% additives according to operative claim 1, that amount is ultimately still according to operative claim 1 because of the open formulation "comprising" chosen to define the composition of the binder system. E2 thus provides the teaching that starch can be used successfully in styrene/butadiene latex binder systems for nonwoven fabrics and would have been considered by the skilled

person in amounts that are according to operative claim 1 in order to provide further textile fabrics.

2.12.4 The simultaneous use of a binder system containing starch and a textile fabric that is a spunbonded nonwoven based on partially aromatic or fully aromatic polyesters is not disclosed as providing any additional effect in the patent in suit. In that respect, the use of both starch and the defined spunbonded nonwoven in a textile fabric cannot be seen as inventive in view of the teachings found in E4 and E2.

2.13 Claim 1 of the main request does therefore not involve an inventive step over E4.

Auxiliary request 1

3. Inventive step

3.1 Claim 1 of auxiliary request 1 differs from claim 1 of the main request in the definition of the amount of binder relative to the raw textile fabric by means of the wording "said binder system being applied to the textile fabric in an amount between 5 and 35 wt.-% of dry binder after drying in relation to the total weight of the raw textile fabric".

3.2 However both parties in appeal had no additional and separate arguments on inventive step for claim 1 of auxiliary request 1, thereby accepting that any conclusion reached for claim 1 of the main request equally applied to it. The Board has no reason to come to a different conclusion as the selection of any range of amount of binder system is not associated to any effect in the patent in suit and given that a typical content of latex binder applied on a non-cellulose

fiber mat in E4 is about 15 to about 40 wt % (column 4, lines 35-43).

3.3 As claim 1 of auxiliary request 1 does not involve an inventive step for the same reasons as outlined for claim 1 of the main request, auxiliary request 1 is manifestly not allowable and there is no need to formally decide on its admittance.

4. Reimbursement of the appeal fee

4.1 The appellant requested the reimbursement of the appeal fee on the grounds that the right to be heard was not respected and therefore a substantial procedural violation occurred. Rule 103(1)(a) EPC indeed foresees that the appeal fee is reimbursed in full where the Board deems an appeal allowable, if such reimbursement is equitable by reason of a substantial procedural violation.

4.2 In the present case, the appellant's argument was that the opposition division severely infringed the right to be heard of the opponent under Article 113 EPC because the problem defined in the contested decision as "the provision of an alternative textile fabric suitable as base interlining for coated sarking, roofing and sealing membranes" (section 6.3 of the contested decision) did not correspond to the problem identified by any of the parties during the opposition proceedings or that given in the summons to attend oral proceedings (section 5.2). In fact, that formulation of the problem was first laid out to the parties with the contested decision.

4.3 The appellant considered in appeal that the opposition division should have informed the parties that it

intended to define the problem differently from the parties and from its own preliminary opinion at least during the the oral proceedings proceedings (statement of grounds of appeal, section VII) and that since the opposition division had failed to do so, the appellant, then opponent, had no chance to succeed with their argumentation regarding inventive step. In particular, the opponent did not know and could not have known that the opposition division would unduly limit the relevant technical field to coated sarking, roofing and sealing membranes such that all attempts of the appellant in the first-instance proceedings to convince the opposition division that the opposed patent was not based on an inventive step were useless.

4.4 The gist of the argument of the appellant with respect to the request for reimbursement of the appeal fee relates to the formulation of the problem over the document of the closest prior art E4. In that regard, it is apparent from the minutes of the oral proceedings (last paragraph, page 4) as well as from the contested decision of the opposition division (section 6.3.1.2 on page 10, 2nd paragraph) that the problem over E4 that was formulated by the appellant in opposition proceedings was the provision of an alternative textile fabric.

4.5 According to the case law, in order to render the reimbursement of the appeal fee equitable, a casual link must exist between the alleged procedural violation and the decision of the department of first instance that necessitated the filing of the appeal (Case Law of the Boards of Appeal of the EPO, 9th edition 2019, V.A.9.7.1). Therefore, independently of the question whether the addition of the wording "suitable as base interlining for coated sarking,

roofing and sealing membranes" to the problem as formulated by the appellant amounted to a procedural violation, it must be analysed whether there is a casual link between this addition and the decision reached.

- 4.5.1 The decision on inventive step of the auxiliary request with regard to E4 as the closest prior art considered that E4 did not disclose starch and that the fabric was a spunbonded nonwoven (sections 6.3.1.1 and 6.3.1.2). The opposition division found that that combination of features was not taught in E4 because E4 only concerned nonwovens made from short fibers and did not relate to nonwoven being spunbonded continuous fibers and E4 did not suggest the addition of starch to the latex binder (section 6.3.1.3).
- 4.5.2 The combination of distinguishing features was also not suggested by E6, E13 or E19 because E6 did not advise the skilled person to use SBR latices instead of an acrylic latex, E13 related to textile finishing processes which were remote to the treatment of polyester spunbonded nonwovens and did not suggest the combination of starch with a SBR latex binder system for the treatment of a nonwoven as disclosed in E4 and E19 did not relate to a polyester substrate, even less to a spunbonded nonwoven based on (partially) aromatic polyester (section 6.3.1.3 on page 11). The further documents E1-E3, E5, E7, E9, E10 and E11 cited by the opponent in the context of the analysis starting from E4 as closest prior art were not relevant because they did not concern the treatment of polyester spunbonded nonwovens (section 6.3.1.4).
- 4.5.3 It is apparent therefore that the reasoning of the opposition division that led to an acknowledgement of

inventive step starting from E4 as closest prior art is not based on the textile fabrics being "suitable as base interlining for coated sarking, roofing and sealing membranes". The same conclusion also applies to the objections of lack of inventive step based on E6 and E19 as closest prior art documents taken in combination with E4, E16 or E19 that are dealt with in the contested decision and for which the limitation of the applications of the textile fabrics as defined in the problem is nowhere mentioned to have been even considered by the opposition division (sections 6.3.2 and 6.3.3 on pages 13 and 14 of the contested decision).

- 4.5.4 There is therefore no basis to conclude that there is a casual link between the addition of "suitable as base interlining for coated sarking, roofing and sealing membranes" to the problem defined as the "provision of an alternative textile fabric" by the opponent during the oral proceedings before the opposition division and the acknowledgement of an inventive step which led to the decision necessitating the filing of an appeal.
- 4.5.5 In view of this the Board finds that the conditions in Rule 103(1)(a) EPC are not met. The request for reimbursement of the appeal fee is therefore refused.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.
3. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated