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Datasheet for the decision of 25 June 2012

Case Number: T 1620/09 - 3.3.05

Application Number: 02790691.6

Publication Number: 1446200

IPC: A62D 5/00, A62B 17/00

Language of the proceedings: EN

Title of invention:
Protective clothing against biological agents

Patentee:
CL. Com S.R.L.

Opponent:
KIMBERLY-CLARK WORLDWIDE, INC.

Headword:
Protective overalls/CL.COM S.R.L.

Relevant legal provisions:
EPC Art. 54, 56, 83

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step (all requests): no - improvement (yes) - technical solution however obvious"

Decisions cited:
G 0009/91, G 0010/91

Catchword:
-

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Case Number: T 1620/09 **-** 3.3.05

D E C I S I O N
of the Technical Board of Appeal 3.3.05
of 25 June 2012

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 25 May 2009 rejecting the opposition filed against European patent No. 1446200 pursuant to Article 101(2) EPC.

Composition of the Board:

Chairman: G. Raths
Members: H. Engl
D. Prietzel-Funk

Summary of Facts and Submissions

I. The appeal is against the decision of the opposition division, posted on 25 May 2009, rejecting the opposition against European patent EP-B-1 446 200.

II. Independent claims 1 and 9 of the patent as granted read as follows:

"1. Overalls made of a material suitable for protecting against biological agents and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between 55 and 75 g/m^2."

"9. Use of overalls as claimed in claim 1, as protective clothing against biological agents, that is microorganisms (bacteriae [sic], parasites, fungi, viruses), including those which have been genetically modified, cell cultures and human endoparasites, which may be able to provoke any infection, allergy or toxicity."

Dependent claims 2 to 8 concern further preferred embodiments of the overalls of claim 1 and dependent claims 10 to 12 concern further preferred uses as per claim 9.

III. The opposition division relied *inter alia* on the following documents:

D1: US-A-5 509 142 and
D3: US-A-5 208 098.

IV. According to the contested decision, D1 did not disclose the thickness of the non-woven polypropylene (PP) substrate nor, consequently, the overall thickness of the laminate which was claimed to be in the range of 270 to 340 µm. The combination of D1 with D3 was considered to be *ex post facto* and would not lead to a material that satisfied the requirements as set out in tests 1 to 11 of the opposed patent while still being sufficiently thin to supply softness and drapability.

Consequently, the claimed subject-matter was considered to meet the requirements of Articles 54 and 56 EPC.

V. The opponent's (appellant's) notice of appeal and the grounds for appeal were received by letters dated 4 August 2009 and 5 October 2009, respectively. The appellant also filed new documents.

VI. The respondent (patentee) filed its observations by letter dated 13 April 2010.

VII. A communication of the board, issued on 26 April 2012, contained preliminary observations of the board in preparation of the oral proceedings.

VIII. Under cover of a letter dated 25 May 2012 the respondent filed new auxiliary requests 1 to 28, an

Enclosure I: A paper by Rory A. Wolf and A. Sparavigna entitled *"Modifying Surface Features"* (publication date not reported) and a printout of a presentation by Rory A. Wolf at the 2007 PLACE Conference (St. Louis, USA), entitled *"Optimizing Extrusion Coating/Lamination Seal Strength by Surface Treatment"*

and

Enclosure II: test report.

IX. The respective independent claims 1 of the second, fourth, fifth, thirteenth and twenty-first auxiliary requests, filed by letter dated 25 May 2012, read as follows:

2. Auxiliary request:

Claim 1 differs from claim 1 as granted only in that the word "spunbonded" is inserted between the words "non-woven" and "polypropylene".

4. Auxiliary request:

"1. Overalls made of a material suitable for protecting against biological agents and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between 55 and 75 g/m^2, **wherein the inner layer of nonwoven polypropylene has a thickness ranging between 240 and**

270 microns and unit weight ranging between 35 and 45 g/m^2 and the outer polyethylene film has a thickness ranging between 30 and 70 microns and unit weight ranging between 20 and 30 g/m^2."

5. Auxiliary request:

"1. Overalls made of a material suitable for protecting against biological agents and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between 55 and 75 g/m^2, **wherein the inner layer of nonwoven polypropylene has a thickness ranging between 245 and 255 microns and unit weight ranging between 37.5 and 40 g/m^2 and the outer polyethylene film has a thickness ranging between 40 and 60 microns and unit weight ranging between 22.5 and 27.5 g/m^2."**

13. Auxiliary request:

"1. **Use of an overall** made of a material suitable for protecting against biological agents and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between

55 and 75 g/m^2, **as protective clothing against biological agents, that is microorganisms (bacteriae** [sic]**, parasites, fungi, viruses), including those which have been genetically modified, cell cultures and human endoparasites, which may be able to provoke any infection, allergy or toxicity."**

21. Auxiliary request:

"1. **Use of an overall** made of a material suitable for protecting against biological agents and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between 55 and 75 g/m^2, **as protective clothing against biological agents, that is microorganisms (bacteriae** [sic]**, parasites, fungi, viruses), including those which have been genetically modified, cell cultures and human endoparasites, which may be able to provoke any infection, allergy or toxicity, wherein said biological agents are microorganisms that can be transmitted by blood and body fluids (HBV, HCV, HIV), agents responsible for BSE and other TSE, and the Bacillus Antracis".**

(Amendments in **bold** print)

X. Oral proceedings took place on 25 June 2012. Informed by the chairman that the board would consider only requests directed to a complete set of claims - which

was not the case for the majority of the auxiliary requests 1 to 28 -, the respondent agreed to withdraw the concerned auxiliary requests 3, 6 to 12, 14 to 20 and 22 to 28. The respondent also filed an amended version of auxiliary request 1 reading as follows:

Auxiliary request 1:

"1. Overalls made of a material **effective** for protecting against **microorganisms that can be transmitted by blood and body fluids including HVB, HLV, HIV, agents responsible for BSE and TSE, and Bacillus Antracis** and exhibiting mechanical resistance properties, characterized in that said material is manufactured by the lamination of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio between polypropylene and polyethylene ranging from 70/30 to 50/50, the thickness of the material ranging between 270 and 340 microns and the unit weight ranging between 55 and 75 g/m^2."

XI. The appellant essentially argued as follows:

The claimed invention was not reproducible without undue burden as the test method for determining the thickness parameter was not described. Therefore, the patent contravened Article 83 EPC.

Starting from D1, the appellant defined the technical problem underlying the patent in suit as providing a suitable non-woven material layer having a suitable thickness.

In view of this problem, the appellant argued that the skilled person would select a thickness value for the non-woven layer in the example of D1 which fell within the range claimed; the selection of the thickness would be based on routine trial and error or on normal design procedures.

There was no reason to believe that the barrier materials of D1 would not protect against biological agents. The burden of proof lay with the respondent to show that the barrier material of D1 would not perform under the tests of the patent. In the absence of such proof, a particular technical effect or an improved performance could not be attributed to the claimed parameter range. Therefore, claim 1 of the patent lacked an inventive step over D1.

XII. The respondent essentially argued as follows:

The respondent agreed that D1 represented the closest prior art in that it belonged to the field of protective coveralls and showed the most features in common with the opposed patent.

The claimed invention differed from D1 in that the total thickness of the laminated PP/PE (polypropylene/polyethylene) was in the range of 270 to 340 µm and in that the present laminates were obtained by lamination of the PP film with a PE film previously prepared, rather than by extrusion coating. As to the differences between these methods, the respondent referred to Enclosure I. D1 was also silent about the coveralls' resistance to blood penetration and against infective agents.

The respondent furthermore raised doubts about the disclosure of D1 concerning the basis weights of the films and laminates reported in Table 1. Certain basis weights in said Table 1 (e.g. "HYTREL on HET") were inconsistent when interpreted as relating to the whole laminate. Other reported basis weights differed in Tables 1 and 2, in spite of the statement in D1 that the PE films in Table 2 were the same as in Table 1. Because of these inconsistencies, the data in Tables 1 and 2 were not reliable. It followed that the claimed invention differed from example "PE on SB" of D1 also by the defined basis weight of the laminate.

As to the effects of the invention, the respondent referred to the test results reported in the opposed patent and to the comparative tests submitted as Enclosure II. It was shown that a comparative laminate having a thickness outside the claimed range failed to resist a blood pressure of 14 kPa according to test 1a of the patent. Such a high test pressure was critically important because it reflected the natural arterial blood pressure of about 13 kPa. Additionally, the comparative product had diminished mechanical properties.

The respondent also argued that the skilled person had no motivation to selectively cherry-pick the laminate "PE on SB" from Table 1 of D1 and to modify it further only with respect to the PE non-woven. If one was to modify said example, Table 2 proposed significantly increasing the basis weight of the upper PE film, thus teaching away from the invention. Similarly, any modification of the thickness of the spunbonded PP

layer in the "PE on SB" example, for instance by choosing from D3 a self-bonded and not spunbonded PP non-woven, could only have been done in hindsight.

The auxiliary requests defined the invention in closer terms.

XIII. Requests

The appellant requested that the contested decision be set aside and that the European patent be revoked.

The respondent requested that the appeal be dismissed or, in the alternative, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims of auxiliary request 1 filed during oral proceedings, or on the basis of auxiliary requests 2, 4, 5, 13 or 21, filed with letter of 25 May 2012.

Reasons for the Decision

1. Sufficiency of disclosure (Article 83 EPC)

The objections under Articles 83 and 100(b) EPC raised by the appellant in the appeal brief (page 8, point 3) constitute a fresh ground of opposition (***i.e.*** a ground which was neither raised and substantiated in the notice of opposition, nor introduced into the proceedings by the opposition division).

In the light of decisions G 9/91 (OJ EPO 1993, 408) and G 10/91 (OJ EPO 1993, 420, point 18 of the reasons),

such a fresh ground may be introduced into the appeal procedure only with the consent of the patentee. This consent was not given (see letter dated 13 April 2012, page 8).

Consequently, these objection are to be disregarded.

2. Novelty (all requests)

D1 discloses disposable protective coveralls made from a variety of high-strength barrier laminate materials. D1 discloses ***inter alia*** a laminate material consisting of a non-woven (spunbonded)(SB) polypropylene (PP) (basis weight of 1.2 ounces/square yard (osy) or 40.7 g/m^2) and a polyethylene (PE) film of 23.7 g/m^2 and 1.25 mils (31.75 µm) thickness in a weight ratio of PP/PE of 63/37 (see Table 1: example "PE on SB"). The board agrees with the opposition division that D1 does not indicate the thickness of the PP non-woven and thus fails to disclose a thickness of the whole laminate in the range of 270 to 340 µm, as required by claim 1. The claimed subject-matter is thus novel with respect to D1.

D2 discloses breathable coveralls protecting a person against hazardous liquids and/or pathogens made from a multi-layer sheet material of spunbonded or meltblown synthetic fibres having a total basis weight of 15 to 300 g/m^2, preferably 50 to 150 g/m^2 (see column 1, lines 13 to 26; column 8, lines 12 to 50). D2 does not disclose a concrete example of a two-layer laminate consisting of a PE film and PP spunbonded web.

D3 is concerned with laminate materials for protective clothing and air-infiltration barrier applications. It

discloses vapour-permeable, liquid-impermeable self-bonded non-woven composites consisting of a porous film and a spunbonded polypropylene web having a basis weight of 0.2 osy or greater (see column 5, lines 12 to 44; columns 17, lines 8 to 28). The preferred examples of D3 are three-layered laminates consisting of two outer layers of non-woven PP webs and an inner layer of an oriented porous polypropylene film. D3 thus fails to disclose a laminate material consisting of an inner layer of non-woven polypropylene with an outer layer of polyethylene film, the weight ratio of polypropylene and polyethylene ranging from 70/30 to 50/50, as employed in the patent in suit.

The claims are therefore considered to comply with the requirements of Article 54 EPC.

3. Inventive step

Main request

3.1 The invention is concerned with overalls made of a material designed to protect the wearer from biological agents, such as microorganisms which can be transmitted by blood and body fluids and agents responsible for BSE (bovine spongiform encephalopathy) and other TSEs (transmissible spongiform encephalopathies). The material is a laminate of a layer of non-woven polypropylene and a layer of a polyethylene film.

3.2 In the view of both parties and the board, document D1 is regarded as the closest prior art, because it discloses protective coveralls made from structurally similar laminates.

More specifically, D1 discloses disposable protective coveralls made from a variety of high strength barrier fabrics offering protection against the penetration of liquids and/or particulates and harmful substances, such as pathogens (see column 1, lines 19 to 27; column 2, lines 9 to 14; column 3, lines 56 to 60; Figure 1). Thus its objectives are similar to those of the opposed patent.

A specific laminate material disclosed in D1 consists of a non-woven (spunbonded) PP web and a PE film in a weight ratio of PP/PE of 63/37, wherein the spunbonded PP web has a basis weight of 1.2 osy (40.7 g/m^2) and the PP film has a basis weight of 23.7 g/m^2, the total basis weight of the entire laminate being 1.9 osy (64.4 g/m^2). The thickness of the PE film is 1.25 mils (31.75 µm) (see Table 1: "PE on SB"). The thickness of the PP non-woven and, consequently, the thickness of the entire laminate are not explicitly known from D1.

The laminates of D1 may be manufactured by extrusion coating (see column 12, line 20), whereas the laminates of the opposed patent are ***"manufactured by the lamination of an inner layer of PP with an outer layer of PE film"*** (see claim 1). The board does not see this as a distinctive feature, because products made from extrusion-coated laminates are not excluded by the wording of claim 1. The respondent argued that the layers of extrusion-coated laminates are inseparable, whereas those of laminated products can be separated. This is not an issue here, and the respondent has otherwise admitted in writing that the laminates resulting from these two processes are generally comparable in their characteristics (see letter dated

25 May 2012, page 2, last paragraph).

3.3 Starting from D1, according to the respondent the problem underlying the patent in suit is to provide a protective overall offering outstanding wearing comfort and improved protection against pathogens, in particular those carried by blood and body fluids.

3.4 As a solution to this problem, the patent in suit proposes a protective overall according to claim 1, characterised in that the thickness of the laminate material ranges between 270 and 340 µm.

3.5 The issue is whether or not the above defined problem has been successfully solved.

The opposed patent contains experimental evidence, in particular Test 1 relating to the resistance of the laminate to penetration by contaminated liquids such as synthetic blood. However, the board notes that the patent in suit does not specify the material on which these tests were carried out. It is merely stated that Tests 1 to 3 are ***"carried out on the overalls of the present invention"*** (paragraph [0073]). It is not clear whether the tested materials effectively had a laminate thickness in the range of 270 to 340 µm, as required by claim 1 as granted, or whether they merely fell under the much broader definitions of the invention given in claim 1 as originally filed (i.e. overalls manufactured by the lamination of a layer of polypropylene with a layer of polyethylene) or in paragraph [0028] of the specification (***i.e.*** overalls consisting of a layer of non-woven material of polypropylene laminated with a polyethylene film, with a specific ratio of unit

weights between the polypropylene and polyethylene).

Moreover, the patent in suit does not contain a comparison with the closest prior art of D1, nor is there any other evidence for an improvement on file. In the board's view, it is ***a priori*** plausible that the materials used in D1, in view of their close similarity, would offer a comparable level of protection against liquids, particulates or biological agents (see column 3, lines 34 to 64, and column 1, lines 19 to 23). Having regard to wearing comfort, it is observed that D1 also relates to breathable barrier fabrics and furthermore states that lower basis weights are preferred for comfort and conformability (see column 8, lines 3 to 15).

In the appeal procedure however, the respondent filed an additional test report (Enclosure II) concerning a comparative example made of a PE/PP laminate, the layers having basis weights of 30 g/m^2 and 25 g/m^2, respectively, and the laminate a total thickness of 250 µm, ***i.e.*** lower than what is claimed in the opposed patent. This laminate was presumed to be representative for D1. Test 1a of said Enclosure II shows that the tested material was effective against penetration by synthetic blood under a pressure of up to 7 kPa, but failed under a test pressure of 14 kPa. According to the respondent, such a high test pressure was critically important because it reflected the natural arterial blood pressure of about 13 kPa. The comparative product had reduced mechanical resistance against wear and tear (tests 5 and 8). However, the test laminate performed satisfactorily under tests determining the resistance against penetration by

various liquid chemicals (test 10), biologically contaminated liquid aerosols (test 2) and biologically contaminated powders (test 3).

In view of these results, the board accepts, in the respondent's favour, that the laminate used in accordance with the opposed patent has improved properties compared with D1, notably as regards its resistance to penetration by synthetic blood and body fluids at high pressures.

So, for the purpose of this reasoning, the above-defined problem is assumed to having been solved.

3.6 It remains to be decided whether or not the claimed solution was obvious in view of the prior art.

Firstly, the board cannot see an inventive selection of materials having regard to D1, spunbonded non-woven PP fabrics and PE films being among the preferred materials used in D1.

Therefore, secondly, the board considers that the critical question to be answered is whether or not the skilled person, confronted with the problem of providing a protective overall having improved protection against pathogens such as those carried by blood and body fluids, would be able to arrive at something falling under the scope of the claims, starting from the products described in D1, in particular the "PE on SB" example.

Having this in mind, it is evident that the appropriate total thickness of the laminate, which is not reported

in D1, largely depends on the degree of resistance sought. Therefore, by examining materials made from a spunbonded PP support having a basis weight of 20 to 75 g/m^2 (see D1, column 5, lines 3 to 20) and various thicknesses, the skilled person would determine that a total thickness of the laminate of 250 µm was insufficient when the test pressure exceeded 7 kPa (see Enclosure II, test 1). It follows therefrom that the thickness has to be increased in order to make the material less permeable and to improve its resistance to penetration, since this was the problem to be addressed. The board also notes that the basis weight of the spunbonded non-woven PP used in accordance with the opposed patent is preferably in the range of 37.5 to 40 g/m^2 (paragraph [0031]), which falls in the middle of the corresponding range disclosed in D1 (20 to 75 g/m^2). The claimed range of total thickness of the laminates is thus obvious in view of the prior art and the problem posed.

3.7 The respondent argued that the resistance to blood penetration was not predictable from D1 on the basis of penetration tests using only water at a lower pressure of about 2 kPa, rather than synthetic blood at a pressure of up to 14 to 20 kPa. The board cannot accept this argument. It has not been shown that a water penetration test cannot be used, at least as a first approximation, for predicting the laminate's performance against penetration by blood and body fluids; these fluids would be expected to penetrate less readily than water, as they are more viscous and contain particulates and solutes. To determine the penetration resistance under higher pressures than those used in D1 is a routine task, as also is the

proposed solution of increasing the substrate thickness.

The respondent also argued that the data given in Tables 1 and 2 of D1 were not reliable because of inconsistencies in the basis weights. It was not clear whether the reported basis weights referred to the whole laminate or only to the film on the substrate. Certain basis weights in said Table 1 (e.g. "HYTREL on HET") were inconsistent when interpreted as relating to the whole laminate. For instance, the basis weights differed in Tables 1 and 2, in spite of the assertion in D1 that the PE films in Table 2 were the same as in Table 1 (column 12, lines 17 to 19).

The board accepts the argument that there are minor inconsistencies in the data of Table 2. However, the board cannot subscribe to the respondent's conclusion that there was reasonable doubt that the "PE on SB" laminate had a total basis weight of 64 g/m^2 (1.9 osy), of which 41 g/m^2 (1.2 osy) belonged to the SB PP substrate, as reported in Table 1. The differences in basis weight of the substrates (1.2 osy SB PP, 2.8 osy HET, 1.5 osy TABBI) appear with reasonable deviations as the respective differences in basis weight of the laminates of which these substrates form part (e.g. PE on HET: 3.7 osy; PE on TABBI: 2.4 osy; PE on SB: 1.9 osy; the same applies to the EnBa and PP laminates). Therefore, the board can conclude that the data in Table 1 are reliable. As regards Table 2, the board does not rely on data of said table, so further arguments are not necessary.

A further argument of the respondent concerned the fact that the PE film of D1 contained about 10% by weight of

TiO_2, as indicated in column 11, lines 28 to 33. However, it was not disputed that taking this into account would not substantially alter the density of the resulting PE film. Therefore, the above conclusions remain the same.

According to a further argument of the respondent, the skilled person would not have taken the example "PE on SB" as a starting point, but for instance rather the "PP on SB" of Table 1. However, the respondent did not give a convincing reason as to why the skilled person should have done so. In any event, no such preference can be derived from D1 itself. It is therefore the board's position that the skilled person would have considered all the prior art's examples as a possible starting point for solving the problem underlying the patent in suit, as defined above.

Consequently, the subject-matter of claim 1 of the main request does not involve an inventive step. The main request is therefore not allowable (Article 56 EPC).

First auxiliary request

3.8 As a solution to the problem posed under point 3.3, the patent in suit proposes overalls according to claim 1 of the first auxiliary request, which are made from a laminate material effective for protecting against microorganisms transmitted by blood and body fluids including HVB, HLV, HIV, agents responsible for BSE and TSE, and Bacillus Antracis, the thickness of the laminate ranging from 270 to 340 µm.

3.9 The reasoning regarding the question of the success of the solution is the same as under point 3.5.

3.10 As to the question of obviousness, in the board's verdict the added feature relating to the effectiveness of the material does not distinguish it from the prior art. The laminated fabrics used in D1 are resistant to penetration by liquids and particulates (see column 2, lines 9 to 14; column 3, lines 34 to 60) and also offer protection from pathogens carried by liquids (column 1, lines 19 to 23). The board also observes that claim 1 is drafted in such a way as to describe a result to be achieved. These ***desiderata*** do not confer a particular degree of effectiveness of actual protection. No comparison with respect to D1 has been made. Therefore, essentially the same arguments as for the main request apply ***mutatis mutandis*** and the same conclusion of lack of inventive step is reached.

Second auxiliary request

3.11 Claim 1 according to this request differs from claim 1 of the main request only in that the non-woven PP is further characterised as spunbonded. As this is one of the preferred materials used in D1 (see Table 1, "PE on SB"; wherein "SB" stands for "spunbonded"; column 10, lines 61 to 67), the same arguments as for the main request apply ***mutatis mutandis***.

The subject-matter of claim 1 of the second auxiliary request therefore lacks inventive step.

Fourth and fifth auxiliary requests

3.12 The respective claims 1 of these requests differ from claim 1 of the main request in that the respective thicknesses of the inner layer of non-woven polypropylene and of the outer polyethylene film and their respective unit weights are defined by narrower ranges.

3.13 The problem underlying the opposed patent is the same as the one for the claims of the main request.

3.14 As to the solution, the characterising features of the subject-matter of the respective claims are as follows:

a) According to claim 1 of the fourth auxiliary request, the inner layer of non-woven PP has a thickness ranging between 240 and 270 microns and unit weight ranging between 35 and 45 g/m^2 and the outer PE film has a thickness ranging between 30 and 70 µm and a unit weight ranging between 20 and 30 g/m^2.

b) According to claim 1 of the fifth auxiliary request, the inner layer of non-woven PP has a thickness ranging between 245 and 255 microns and unit weight ranging between 37.5 and 40 g/m^2 and the outer PE film has a thickness ranging between 40 and 60 µm and a unit weight ranging between 22.5 and 27.5 g/m^2.

3.15 The arguments concerning the question of the success of the solution according to the main request apply ***mutatis mutandis*** to the fourth and fifth auxiliary requests.

3.16 As regards the question of obviousness, it is sufficient to observe that D1 generally discloses a

basis weight for the non-woven PP of 20 to 75 g/m^2 (see column 5, lines 13 to 20) and a thickness of the PE film of approximately 25 to 75 µm (***"about 1.0 to about 3.0 mil"***) (see column 5, lines 34 to 35). The preferred spunbonded PP used as a substrate for the laminates listed in Table 1 had a basis weight of 41 g/m^2 ("1.2 osy"), which is, due to the approximate conversion, for all practical purposes indistinguishable from the upper limit of 40 g/m^2 recited in claim 1 of the fifth auxiliary request. The board therefore concludes that these amendments do not give rise to an inventive selection.

3.17 The subject-matter of the respective claim 1 of the fourth and fifth auxiliary requests does not involve an inventive step. Said requests are therefore also not allowable (Article 56 EPC).

Thirteenth and twenty-first auxiliary requests

3.18 The claims of these requests are directed to the use of an overall made from a protective laminate material as defined in the claims, as a protective clothing against biological agents, i.e. microorganisms such as bacteria, fungi, parasites, viruses, etc.

3.19 The problem underlying the invention, at the level of the claims of these auxiliary requests, is thus defined in a manner analogous to the one of the main request, namely to provide a protective overall giving the wearer improved protection against pathogens, in particular those carried by blood and body fluids.

3.20 Regarding the solution, reference is made to points 3.5 and 3.14 a). The same arguments as those given with respect to the claims of the main request and the fourth auxiliary request apply m*utatis mutandis*.

3.21 The same holds for the question of the success of the solution (see points 3.5 and 3.15).

3.22 The claimed solution is obvious because the disposable protective coveralls known from D1 are designed to offer protection against penetration by liquids and harmful substances, such as pathogens, which may be carried by liquids (see column 1, lines 19 to 27; column 2, lines 10 to 15; column 3, lines 56 to 60).

3.23 Therefore, the subject-matter of the respective claims 1 of the 13th and the 21st auxiliary requests lacks inventive step (Article 56 EPC).

3.24 As no allowable request is on file, the patent must be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar | The Chairman

C. Vodz | G. Raths