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**Datasheet for the decision  
of 13 February 2024**

**Case Number:** T 0990/22 - 3.2.07

**Application Number:** 16715914.4

**Publication Number:** 3256402

**IPC:** B65D85/32, D21H21/54, D21H21/56

**Language of the proceedings:** EN

**Title of invention:**  
PACKAGING UNIT OF FOAMED MOULDED FIBER MATERIAL AND METHOD FOR  
MANUFACTURING SUCH PACKAGING UNIT

**Patent Proprietor:**  
Huhtamaki Molded Fiber Technology B.V.

**Opponent:**  
Brødrene Hartmann A/S

**Relevant legal provisions:**  
EPC Art. 54(3), 56, 84, 114  
RPBA 2020 Art. 11, 12(2), 12(6), 13(2)

**Keyword:**

Novelty - (no) - main request

Inventive step - obvious alternative - auxiliary requests

Claims - clarity after amendment (no)

Late-filed evidence - admitted in first-instance proceedings  
(yes) - main request

Late-filed request - admitted in first-instance proceedings  
(no)

Amendment after summons - exceptional circumstances (no)

Remittal - (no)

**Decisions cited:**

T 0544/12, T 0574/17



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 0990/22 - 3.2.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.07**  
**of 13 February 2024**

**Appellant:** Huhtamaki Molded Fiber Technology B.V.  
(Patent Proprietor) Poolsterweg 3  
8938 AN Leeuwarden (NL)

**Representative:** Verdijck, Gerardus  
Arnold & Siedsma  
Bezuidenhoutseweg 57  
2594 AC The Hague (NL)

**Respondent:** Brødrene Hartmann A/S  
(Opponent) Ørnegårdsvej 18  
2820 Gentofte (DK)

**Representative:** Budde Schou A/S  
Dronningens Tvaergade 30  
1302 Copenhagen K (DK)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
11 February 2022 concerning maintenance of the  
European Patent No. 3256402 in amended form.**

**Composition of the Board:**

**Chairman** G. Patton  
**Members:** S. Watson  
R. Cramer

## **Summary of Facts and Submissions**

- I. An appeal was filed by the patent proprietor against the decision of the opposition division maintaining European patent No. 3 256 402 in amended form with the set of claims according to the then auxiliary request 7.
- II. In preparation for oral proceedings, the board gave its preliminary opinion in a communication pursuant to Article 15(1) RPBA, dated 20 December 2023, which took into account the patent proprietor's statement of ground of appeal and submissions of 21 February 2023 and 24 August 2023 as well as the opponent's reply to the appeal and its submissions of 30 June 2023 and 28 August 2023.
- III. Neither party responded in writing to the board's communication.
- IV. Oral proceedings before the board took place on 13 February 2024.

At the conclusion of the proceedings the decision was announced. Further details of the oral proceedings can be found in the minutes.

- V. The final requests of the parties are as follows:

for the patent proprietor ("appellant")

- that the decision under appeal be set aside, and the opposition be rejected, i.e. the patent be maintained as granted (main request) or
- as an auxiliary measure, that the patent be maintained in amended form according to one of

the auxiliary requests I, II, III, III', IV, IV', V, V', V'', V''' VI, VI', VI'', VI''', VII, VII', VII'', VII''' or VIII, filed with the statement of grounds of appeal;

for the opponent ("respondent")  
- that the appeal be dismissed.

VI. The following documents are referred to in this decision:

- D1: WO 2014/080084 A1
- D2: WO 2013/160553 A1
- D3: Wikipedia "Foaming agent" 1 December 2014, XP055667309 Retrieved from the internet: [https://en.wikipedia.org/w/index.php?title=foaming\\_agent&oldid=636146333](https://en.wikipedia.org/w/index.php?title=foaming_agent&oldid=636146333) [retrieved on 2020-02-11]
- D5: WO 2015/036659 A1.
- D8: Wikipedia "Bagasse"
- D9: Feedipedia Animal feed resources information system: Sugarcane bagasse 24 October 2012
- D11: Samadi, S. et al "Production of single cell protein from sugarcane bagasse by *Saccharomyces cerevisiae* in tray bioreactor" *International Journal of Engineering* vol. 29 No. 8 pp. 1029-1036, August 2016
- D12: Lunsin, R. et al "Effect of urea- and molasses-treated sugarcane bagasse on nutrient composition and *in vitro* rumen fermentation in dairy cows", *Agriculture and Natural Resources*, 52(2018) pp.622-627
- D13: El-Sayed, S. et al "Bioconversion of sugarcane bagasse into a protein-rich product by white rot fungus", *Conservation*

*and Recycling*, 12 (1994) pp. 195-200.

VII. Independent claim 1 of the main request reads as follows:

"Packaging unit (2) made of moulded pulp for products like eggs (P), comprising:

- a carrier part (10) having a length, a width and a depth; and
- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, wherein the solid content of the fiber material is above 35% by weight, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm."

VIII. Independent claim 1 of auxiliary request I reads as follows (amendments shown with respect to claim 1 of the main request):

"Packaging unit (2) made of moulded pulp for products like eggs (P), comprising:

- a carrier part (10) having a length, a width and a depth; and
- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, wherein the solid content of the fiber material is above 35% by weight, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm,

and the solid content of the fiber material after forming and before drying is above 35% by weight."

IX. Independent claim 1 of auxiliary request II reads as follows (amendments shown with respect to claim 11 of the main request):

"Method for manufacturing a packaging unit (2), comprising the steps of:

- providing a foamed moulded fiber material, comprising fiber material and a foaming agent, wherein the foaming agent comprises SLES, SDS and/or ALS; and

- moulding the packaging unit, wherein the packaging unit comprises:

- a carrier part (10) having a length, a width and a depth; and

- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, wherein the solid content of the fiber material is 35% by weight, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight according to one or more of the foregoing claims from the material."

X. Independent claim 1 of auxiliary request III reads as follows (amendments shown with respect to claim 1 of the main request):

"Packaging unit (2) made of moulded pulp for products like eggs (P), comprising:

- a carrier part (10) having a length, a width and a depth; and
- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, ~~wherein the solid content of the fiber material is above 35% by weight,~~ characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight."

XI. Independent claim 1 of auxiliary request III' reads as follows (amendments shown with respect to claim 1 of auxiliary request II)

"Method for manufacturing a packaging unit (2), comprising the steps of:

- providing a foamed moulded fiber material, comprising fiber material and a foaming agent, wherein the foaming agent comprises SLES, SDS and/or ALS; and
- moulding the packaging unit, wherein the packaging unit comprises:

- a carrier part (10) having a length, a width and a depth; and
- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, ~~wherein the solid~~



~~content of the fiber material is 35% by weight,~~  
characterized by the foaming agent comprising  
SLES, SDS and/or ALS, wherein the depth is above  
2 cm, and the solid content of the fiber material  
after forming and before drying is above 35% by  
weight."

XII. Independent claim 1 of auxiliary request IV reads as follows (amendments shown with respect to claim 1 of the main request)

"Packaging unit (2) made of moulded pulp for products like eggs (P), comprising:  
- a carrier part (10) having a length, a width and a depth; and  
- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,  
wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material,  
wherein the material comprises natural fibers of a non-wood lignocellulosic biomass, and a foaming agent, ~~wherein the solid content of the fiber material is above 35% by weight,~~ characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight and wherein the protein content of the biomass is below 2% of dry weight of the biomass."

XIII. Independent claim 1 of auxiliary request IV' reads as follows (amendments shown with respect to claim 1 of auxiliary request II)

"Method for manufacturing a packaging unit (2), comprising the steps of:

- providing a foamed moulded fiber material, comprising fiber material and a foaming agent, wherein the foaming agent comprises SLES, SDS and/or ALS; and

- moulding the packaging unit, wherein the packaging unit comprises:

- a carrier part (10) having a length, a width and a depth; and

- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,

wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material, wherein the material comprises natural fibers of a non-wood lignocellulosic biomass, and a foaming agent, ~~wherein the solid content of the fiber material is 35% by weight~~, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight, and wherein the protein content of the biomass is below 2% by weight of the biomass."

XIV. Independent claim 1 of auxiliary request V reads as follows (amendments shown with respect to claim 1 of the main request)

"Packaging unit (2) made of moulded pulp for products like eggs (P), comprising:

- a carrier part (10) having a length, a width and a depth; and

- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,  
wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material, wherein the material comprises natural fibers of a non-wood lignocellulosic biomass, and a foaming agent, wherein the solid content of the fiber material is above 35% by weight, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight, wherein the foamed mouldable fiber material comprises a volume percentage of more than 50% air, wherein air relates to the gas that is provided and/or used when foaming the moulded pulp material, wherein the mouldable pulp before forming has a consistency relating to the fiber-water ratio of above 1.0% by weight, and wherein the protein content of the biomass is below 2% of dry weight of the biomass."

XV. Independent claim 1 of auxiliary request V' reads as follows (amendments shown with respect to claim 1 of auxiliary request II)

"Method for manufacturing a packaging unit (2), comprising the steps of:  
- providing a foamed moulded fiber material, comprising fiber material and a foaming agent, wherein the foaming agent comprises SLES, SDS and/or ALS; and  
- moulding the packaging unit, wherein the packaging unit comprises:  
- a carrier part (10) having a length, a width and a depth; and

- one or more product compartments (48) that are provided in the carrier and are configured for receiving a product,  
wherein the moulded pulp comprises a foamed moulded fiber material, comprising a fiber material, wherein the material comprises natural fibers of a non-wood lignocellulosic biomass, and a foaming agent, wherein the solid content of the fiber material is 35% by weight, characterized by the foaming agent comprising SLES, SDS and/or ALS, wherein the depth is above 2 cm, and the solid content of the fiber material after forming and before drying is above 35% by weight, wherein the foamed mouldable fiber material comprises a volume percentage of more than 50% air, wherein air relates to the gas that is provided and/or used when foaming the moulded pulp material, wherein the mouldable pulp before forming has a consistency relating to the fiber-water ratio of above 1.0% by weight, and wherein the protein content of the biomass is below 2% of dry weight of the biomass."

XVI. The wording of the claims of auxiliary requests V'', V''' VI, VI', VI'', VI''', VII, VII', VII'', VII''' and VIII is not relevant to this decision so the claims are not reproduced here.

XVII. The arguments of the parties relevant for the decision are dealt with in detail in the reasons for the decision.

## Reasons for the Decision

1. *Main request - claim 1 as granted - Novelty (Article 54 EPC)*

1.1 In the decision under appeal the opposition division found that the subject-matter of claim 1 of the patent as granted (main request) was not novel with respect to the disclosure of document D5.

1.2 The appellant contested this decision and argued that document D5 should not have been admitted into the opposition proceedings and in any case did not specify the percentage of the solid content of the fiber material, nor did it show a packaging unit suitable for products like eggs.

1.3 *Admittance of document D5*

1.3.1 The appellant argued that D5 was late-filed and should not have been admitted by the opposition division as it was not *prima facie* relevant.

With its submissions of 24 August 2023 the appellant argued that the decision was insufficiently reasoned as it was merely stated that document D5 was *prima facie* relevant without giving further reasons.

1.3.2 The board notes that document D5 was filed on 12 May 2021, after the opposition period. Therefore, when used as prior art against the main request (claims as granted), it is to be regarded as late-filed and the opposition division had discretion to not admit the document into the opposition proceedings.

1.3.3 Both parties were given an opportunity to present their arguments on this issue at the oral proceedings before the opposition division (see minutes, point 4.).

1.3.4 The opposition division used *prima facie* relevance of the document as its main criterion for admittance. This is acknowledged as being a decisive criterion for admitting late-filed documents (see Case Law of the Boards of Appeal ("CLB"), 10th edition 2022, IV.C.4.5.3 a)).

1.3.5 It is correct that the decision only states that document D5 is considered to be *prima facie* relevant. However, as the document is then fully considered when novelty is assessed, the reasoning is not insufficient.

The appellant cited decision T 544/12 in support of its arguments. The reasoning of this decision cannot however be applied here as in that case the opposition division did not admit the contested late-filed document (see T 544/12, Reasons 2.2.4).

1.3.6 It is established case law that an opposition division must have a certain degree of freedom in exercising its discretion on admittance. Therefore a board of appeal should not review all facts and circumstances of the case as if it were the opposition division and decide if it would have made the same decision. In the present case it is not for the board to consider whether it would have found the document *prima facie* relevant or not, it is sufficient to determine that the opposition division exercised its discretion taking into account the right principles (*prima facie* relevance) and in a reasonable manner (CLB, *supra*, V.A.3.4.1 b)).

In addition, and as put forward by the respondent in its submissions of 28 August 2023, this board considers it cannot hold inadmissible a document which was admitted by the opposition division and on which the decision was based (see CLB, *supra*, IV.C.4.5.2 and V.A. 3.4.4).

1.3.7 Therefore document D5 forms part of the appeal proceedings.

1.4 *Novelty of claim 1 - document D5*

1.4.1 The appellant contested that document D5 disclosed that the solid content of the fiber material was above 35% by weight.

1.4.2 The opposition division reasoned that from Example 1 of document D5, together with page 7, lines 15 to 16 of the description, the percentage of the solid content could be directly calculated.

1.4.3 The appellant argued that the opposition division combined information from two different embodiments, which was not allowable and, in any case, it was not possible from Example 1 to calculate the solid fiber content for either the end product or an intermediate product.

1.4.4 The passage of D5 relied on by the opposition division on page 7, lines 15 to 16, states that "the dry fibrous product has a water content of 12% by weight or less".

As reasoned by the opposition division, this means that the solid content of the dry fibrous product is 88% or more by weight.

As the respondent argued, it is part of the common general knowledge of the skilled person that a surfactant is used in very low amounts compared to the amount of fibres, as is confirmed by Example 1 in document D5 which indicates that 16-20g of SDS is added to 250g of fibre.

The appellant argued that further components may be added, such as bonding agents.

However, the bonding agents referred to by the appellant are clearly shown as optional (D5, page 10, lines 14 to 15; page 11, lines 5-6 and claim 32).

- 1.4.5 The appellant is correct that according to established case law it is not permissible to combine separate items belonging to different embodiments (see CLB, *supra*, I.C.4.2, first paragraph).

However, it is permissible to combine the teaching of an example with the description in a patent document, provided the example is in line with the general technical teaching (see CLB, *supra*, I.C.4.2, fifth paragraph).

The appellant views the disclosure on page 7, lines 15 to 16 as referring to a separate embodiment, but in the board's view the skilled person understands this as indicating further details of the general teaching of the invention set out on page 6, lines 15 to 20, rather than a completely separate embodiment. The paragraph on page 7, lines 12 to 15, before the disclosure relating to the water content of the dry fibrous product, refers to the fibre consistency which is said to be 0.1-10% based on the weight of the suspension. Example 1 is in line with this general teaching so that it is



permissible to combine the disclosure of page 7, lines 15 to 16 with that of example 1.

1.4.6 Therefore a product having a solid content of the fiber matter above 35% by weight in combination with the other features of claim 1 is directly and unambiguously disclosed in document D5.

1.5 The appellant also contended at oral proceedings that the packaging unit of D5 was not suitable for "products like eggs" as was required by the first feature of claim 1 of the main request.

The appellant argued that the typical thicknesses disclosed in D5 (page 5 and claim 28) were much thicker than that used in commercially available egg cartons.

1.5.1 It is established case law that the claim formulation, of a product claim with a purpose, such as "packaging unit...for products like eggs" as in the present case, is interpreted such that the packaging unit must be *suitable for* the purpose, for example for holding products like eggs. A piece of prior art can only be regarded as disclosing the purpose feature if it possesses the implicit physical features which would make it reasonable to be used for the stated purpose (See CLB, *supra*, I.C.8.15).

1.5.2 That the packaging unit disclosed in D5 may have a thickness greater than that found in general commercial use does not negate its physical suitability to hold products like eggs.

1.6 The appellant has therefore not convincingly shown that the decision under appeal was incorrect with respect to the main request.

2. *Auxiliary request I - claim 1 - lack of clarity - Article 84 EPC*

2.1 The opposition division found that the then auxiliary request 2 was not clear because the feature introduced into claim 1, that "the solid content of the fiber material after forming and before drying is above 35% by weight" related to an intermediate product and it could not be determined when considering the final packaging unit, whether this condition had in fact been met during production of the packaging unit.

2.2 The appellant argued that the opposition division was incorrect as the skilled person was able to determine this feature in the final product by considering the surface roughness, homogeneity and orientation of the fibres using a microscope.

2.3 In its preliminary opinion, the board agreed with the respondent that the appellant's allegation regarding the possibility of determining the solid content of an intermediate product in the final packaging unit was unsubstantiated.

The board also agreed with the reasoning of the opposition division that even if conclusions could possibly be drawn in certain extreme cases, the appellant has not shown that such an analysis would be able to differentiate between percentage weights close to 35%.

At the oral proceedings before the board, both parties relied on their written submissions for this point. The board sees no reason to change its preliminary opinion

and concludes that claim 1 of auxiliary request I does not fulfil the requirements of Article 84 EPC.

The appellant has therefore not convincingly shown the incorrectness of the decision on this point.

3. *Auxiliary request II - claim 1 - clarity (Article 84 EPC)*

3.1 Claim 1 of auxiliary request II refers to a method for manufacturing a packaging unit and includes the feature that the molded pulp which the packaging unit is made of "comprises a foamed moulded fiber material, comprising a fiber material and a foaming agent, wherein the solid content of the fiber material is above 35% by weight" as well as the feature "the solid content of the fiber material after forming and before drying is above 35% by weight".

3.2 The opposition division found that claim 1 (of then auxiliary request 3) was not clear. It reasoned that the solid content of the fiber material in both the final product and in the intermediate product, after forming and before drying, could not be above 35% by weight, particularly in the range close to 35% by weight.

3.3 In the board's view and as argued by the appellant, the claim does not require that the two solid content % by weight features have similar values or are both close to 35%. As argued by the appellant, as long as the intermediate product is above 35%, the final product will also be above 35%, probably by a significant amount.

- 3.4 The opposition division also referred back to its reasoning relating to lack of clarity of auxiliary request 2 (auxiliary request I in appeal). The board cannot follow how this reasoning relates to claim 1 of auxiliary request II which is directed to a method with distinct steps, i.e. before and after drying. It is inherent that if the solid content is just above 35% by weight before drying that it will be even higher after drying so that there is no inconsistency in the claimed method. Furthermore, it is not necessary in method claim 1 of auxiliary request II to be able to determine from the final product what the solid content % by weight of the fiber material is before drying, as this can obviously be performed during the manufacturing method.
- 3.5 Therefore, the appellant convincingly demonstrated that the decision under appeal was incorrect in finding that claim 1 of auxiliary request II (then auxiliary request 3) was not clear.
- 3.6 Further clarity objections raised by the respondent - admittance (Article 13(2) RPBA)
- 3.6.1 At the oral proceedings before the board the respondent raised two clarity objections against claim 1 of auxiliary request II, namely that the claim had features which were repeated and was therefore not concise and that the definite article used before "moulded pulp" had no antecedent.
- 3.6.2 The appellant requested that these objections not be admitted as they were filed at the latest stage of the appeal proceedings and no exceptional circumstances were present.

The respondent did not indicate any exceptional circumstances justified by cogent reasons for raising these objections for the first time at oral proceedings, but argued that the board had the responsibility *ex officio* to consider whether amended claims fulfilled the requirements of Articles 84 and 123(2) EPC.

3.6.3 According to Article 13(2) RPBA in the version as in force since 1 January 2024, amendments made to a party's appeal case after notification of a communication under Article 15(1) RPBA shall, in principle, not be taken into account unless there are exceptional circumstances, justified by cogent reasons by the party concerned.

3.6.4 In the present case, the respondent had the opportunity to raise these objections with its reply to the appeal, or with its written submissions of 30 June 2023 and 28 August 2023.

The admittance of completely new objections at the very latest stage of the appeal proceedings would be contrary to the primary object of appeal, as set out in Article 12(2) RPBA, to review the decision under appeal. It would also place the other party in the position of having to deal with such objections for the first time at oral proceedings, without preparation, which could be seen as unfair.

3.6.5 Regarding the respondent's argument that the board should consider *ex officio* if the claims fulfilled the requirements of Articles 84 and 123(2) EPC, it is established case law that although a board is required to examine the facts of its own motion (Article 114(1) EPC), this obligation is limited by Article 114(2) EPC

and Articles 12 and 13 RPBA, especially in *inter partes* proceedings (CLB, *supra*, V.A.3.3.1, first paragraph and T 574/17, Reasons 2.3.8).

3.6.6 The new objections regarding lack of clarity (Article 84 EPC) are therefore not admitted into the appeal proceedings (Article 13(2) RPBA).

### 3.7 *Request for remittal*

3.7.1 The appellant requested that the case be remitted to the opposition division to discuss novelty and inventive step of the subject-matter of claim 1 of auxiliary request II as these issues were not dealt with in the decision under appeal and the parties should be given the opportunity to have such issues discussed by two instances.

3.7.2 The respondent argued that a remittal was unnecessary as the opposition division had dealt with inventive step of claim 1 of the then auxiliary request 4 which differed from auxiliary request II by only one feature which was directly linked to another feature common to both claims.

3.7.3 In the appellant's view, even though the opposition division had considered inventive step with respect to the then auxiliary request 4 (now auxiliary request III'), the claims were not identical so that it would be an undue burden to discuss inventive step.

3.7.4 Parties do not have a fundamental right to have their case examined at two levels of jurisdiction (CLB, *supra*, V.A.9.2.1). According to Article 11 RPBA a board shall not remit a case for further prosecution unless special reasons present themselves for doing so.

In the present case, the decision under appeal had dealt with inventive step of the subject-matter of such a similar claim that it could be expected that the parties and the board were able to discuss and consider this objection on the basis of the opposition division's findings without undue burden.

Therefore, no special reasons are present and the case is not remitted to the opposition division for further prosecution.

4. *Auxiliary request II - claim 1 - inventive step  
(Article 56 EPC)*

4.1 The opposition division found that claim 1 of auxiliary request 4 in opposition proceedings, which corresponds to claim 1 of auxiliary request III' in appeal proceedings, was not inventive over the combination of the teaching of documents D1 with D2 or D3.

Claim 1 of auxiliary request II differs from claim 1 of auxiliary request III' in that the feature "wherein the solid content of the fiber material is 35% by weight", referring to the finished product, is still present.

4.2 The opposition division found only a single distinguishing feature over document D1: the foaming agent comprising SLES, SDS and/or ALS. This distinguishing feature is also not contested by the respondent.

4.3 In the appellant's view, three further distinguishing features were to be found in claim 1 of auxiliary request II compared with the disclosure of D1, namely the two features relating to the solid content of the

fiber material being above 35% by weight, and the depth of the carrier part being above 2 cm.

4.4 The board however follows the arguments of the respondent that document D1 discloses these three features.

4.4.1 Document D1, on page 7 lines 29 to 30, discloses that the "moldable fibrous product may comprise from 0.1 to 74 % by weight of fibers". Further, on page 14, lines 9 to 10 of document D1 it is described that the product can be moulded by moulding the "moldable fibrous product".

The appellant argued that there was no direct and unambiguous disclosure that the method set out in document D1, on page 8, inherently led to the solid content of the fiber material after forming and before drying being above 35% by weight.

However, the board follows the arguments of the respondent that if the moldable fibrous product formed according to the method set out on page 8, comprises 74% by weight of fibers (D1, page 7, lines, 29 to 30), then after molding, before drying it will inevitably have the same or higher solids content. The molding takes place with the aid of heat (D1, page 13, lines 4 to 6) and the claim contains no limitation regarding how the drying occurs.

4.4.2 The appellant argues that the weight percentages given in document D1 are weight percentages of the dry solids content, not the solid content of the fiber material after forming and before drying. However, the board considers that although the weight percentages for the polymer and optional plasticizer are stated to be



weight percentages of the dry product, no such indication is given for the fibers. D1 clearly discloses that the moldable fibrous product itself, i.e. the material from which the final product is then moulded, "may comprise from 0.1 to 74% by weight of fibers" (D1, page 7, lines 29 to 30).

- 4.4.3 In its submissions of 21 February 2023 the appellant argues also that the lower limit of this range is not suitable for manufacturing a packaging unit made of moulded pulp and that the upper limit of 74% would not be suitable in the process of the patent in suit as the amount is not suitable for moulding a pulp mix. According to the appellant, the range disclosed in D1 is not enabling and cannot be considered.

The board cannot follow this argument, firstly as it is an unsubstantiated allegation and secondly because the claimed subject-matter of the patent in suit includes all values above 35% by weight, including 74%, so that it is not clear how this value would not be suitable for the process of the patent in suit.

- 4.4.4 Therefore, document D1 inherently discloses an intermediate product after forming and before drying where the solid content of the fiber material is above 35% by weight.

As the solid content of the product after forming and before drying is above 35% by weight, the final product also inevitably has at least this solid content.

- 4.4.5 Regarding the feature that the depth of the carrier part is above 2 cm, the opposition division and respondent referred to page 1, lines 15 to 16 as disclosing this feature.

The board agrees with the appellant that there is no explicit disclosure of a packaging unit having a depth above 2cm as no specific dimensions are mentioned in document D1. However, there is an implicit disclosure of above 2 cm in the cited passage of page 1, lines 15 to 16, as the skilled person would understand that an egg case has a depth of more than 2 cm.

- 4.5 Document D1 discloses that the foaming agent is selected from anionic and non-ionic surface active agents, polyvinyl alcohols and foamable starches (D1, page 12, lines 17 to 19).

It does not however specify any particular foaming agent.

Therefore, as argued by the respondent, the single distinguishing feature is regarded as the choice of foaming agent used being SLES, SDS and/or ALS.

- 4.5.1 The appellant does not contest that documents D2 and D3 show the use of SLES, SDS and/or ALS as foaming agents. However, it argued that the skilled person would not consider these documents as D2 related to two-dimensional packaging paper or board and document D3 related to personal care products.
- 4.5.2 The board, however, agrees with the opposition division's reasoning that the skilled person would consider at least document D2.

Document D1 refers explicitly to the paper, board, cardboard and tissue industry (D1, page 3, lines 17 to 21; page 10, lines 12 to 14; page 12, lines 23 to 26).

The appellant argued that D1 did not mention the paper, board, cardboard or tissue industry in relation to the composition of the material, but only in relation to the understanding of terms used and examples of equipment which could be used in producing the product of D1.

The board notes that it is established case law that prior art in the specific and neighbouring fields of an application is relevant for the question of inventive step (CLB, *supra*, I.D.8.2).

Whether D1 and D2 form part of the same specific field or not, they clearly are at least neighbouring fields as both relate to producing foam formed fibrous products, whether in sheet form alone or for further processing.

- 4.5.3 The contested patent does not indicate any particular technical effect from the use of SLES, SDS and/or ALS as the foaming agent. The skilled person, starting from the teaching of document D1 therefore is seeking a suitable foaming agent.

Document D2 discloses SDS, an anionic surfactant, as the preferred surfactant for use in manufacturing a foam formed fibrous product (D2, page 5, lines 3 to 4).

It is thus obvious for the skilled person to pick SDS from the available foaming agents when carrying out the method of document D1 and thereby arrive at the subject-matter of claim 1 of auxiliary request II.

- 4.6 The subject-matter of claim 1 of auxiliary request II is therefore not inventive (Article 56 EPC) and this request is not allowable.

5. *Auxiliary requests III, IV and V*

- 5.1 The respondent objected to the admittance in the appeal proceedings of auxiliary requests which were not admitted or not decided on by the opposition division, including auxiliary requests III, IV and V.

The board notes that, irrespective of the issue of admittance of auxiliary requests III, IV and V, these requests all contain a product claim to a packaging unit with the feature relating to the solid content of the fiber material after forming and before drying, so that these requests do not fulfil the requirements of Article 84 EPC for the same reasons as for claim 1 of auxiliary request I (see point 2. above).

6. *Auxiliary request III' - claim 1 - inventive step (Article 56 EPC)*

- 6.1 Claim 1 of auxiliary request III' contains all the features of claim 1 of auxiliary request II. Both parties agreed that the conclusion of the board with respect to inventive step of the subject-matter of claim 1 of auxiliary request II also applied to this request.

Therefore, for the same reasons as given above in point 4. for auxiliary request II, the subject-matter of claim 1 is obvious in view of the combination of documents D1 and D2 (Article 56 EPC).

7. *Auxiliary request IV' - admittance into appeal proceedings*

- 7.1.1 According to Article 12(6), first sentence, RPBA, a board shall not admit requests which were not admitted in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.

Current auxiliary request IV' corresponds to auxiliary request 5 which was not admitted by the opposition division.

- 7.1.2 Auxiliary request 5 was submitted at the oral proceedings before the opposition division in an attempt to overcome the objection to then auxiliary request 4, which was found not to be inventive with respect to document D1 in combination with documents D2 or D3. This objection had been raised against the patent as granted in the notice of opposition and the opposition division had given its preliminary opinion in the annex to the summons to oral proceedings, that the objection held against the patent as granted.

Therefore, no unexpected events occurred at the oral proceedings before the opposition division, and the submission of auxiliary request 5 at the oral proceedings is considered to be late as it could have been filed with the auxiliary requests submitted on 16 April 2021.

The opposition division therefore had discretion not to admit the request.

- 7.1.3 As set out above in relation to the admittance of document D5, in reviewing discretionary decisions of the opposition division, a board is limited to considering whether the opposition division exercised its discretion according to the wrong principles,

without taking into account the right principles, or in an unreasonable way (see also CLB, *supra*, IV.C.5.1.4 c)).

It is again emphasised that, in order to leave the exercise of discretion to the opposition division, it is not for the board to consider the facts and circumstances of the case and decide whether or not it would have taken the same decision.

7.1.4 The opposition division reasoned that it would be unfair for the respondent to have to react to an auxiliary request with the particular features from the description in a new combination at such a late stage of the proceedings.

This is understood to also encompass procedural economy, as in order to allow the opponent the opportunity to react appropriately to the new auxiliary request, the proceedings would have presumably had to be interrupted for some time.

7.1.5 The appellant argued that as the feature from the description had been introduced in auxiliary request III (and III') as filed on 16 April 2021, the opponent and opposition division had sufficient time to familiarise themselves with the subject-matter.

7.1.6 However, as argued by the respondent, and also reasoned by the opposition division, claim 1 of auxiliary request 5 was not identical to any claim filed with the appellant's submissions of 16 April 2021. Although the features introduced into the auxiliary request were found in the earlier filed requests, they were in combination with a number of further features. The respondent could not have been expected to also

consider a broader claim having only the features introduced into auxiliary request 5 but without the further features introduced into the method claim of then auxiliary requests III/III'.

It is also noted that the appellant could have filed this request at an earlier stage of the opposition proceedings, either in its reply to the notice of opposition or at the latest with its submissions of 16 April 2021.

- 7.1.7 It therefore appears that the opposition division exercised its discretion reasonably, and no circumstances of the appeal case appear to justify its admittance. Thus, according to Article 12(6), first sentence, RPBA, auxiliary request IV' is not admitted into the appeal proceedings.
8. *Auxiliary request V' - claim 1 - inventive step (Article 56 EPC)*
- 8.1 Auxiliary request V' corresponds to auxiliary request 6 of the decision under appeal. The opposition division found that the subject-matter of claim 1 was not inventive over the combination of document D1 with D2 or D3.
- 8.2 The appellant argued, in addition to the arguments used above with respect to auxiliary request II, that D1 did not disclose two of the newly introduced features, namely that "the protein content of the biomass is below 2% of dry weight of the biomass" and "the mouldable pulp before forming has a consistency relating to the fiber-water ratio of above 1.0% by weight."

- 8.3 The opposition division reasoned that document D1 suggested the use of bagasse (D1, page 6, line 4). As bagasse had a "composition which does not change over time...the skilled person knows that the protein content of bagasse is 1.8%". Therefore, the feature of claim 1 that the protein content of the biomass is below 2% of dry weight of the biomass, was known from document D1.
- 8.4 The appellant argued that bagasse did not automatically have a protein content of 1.8% and submitted documents D11 to D13 as examples of bagasse with a higher protein content.
- 8.5 The respondent argued that the protein content disclosed in documents D11 to D13 could not be considered "normal" over the protein content disclosed in documents D8 and D9.
- 8.6 Both parties agreed at the oral proceedings before the board to consider documents D8, D9, D11, D12 and D13 in the appeal proceedings and the board saw no reason not to do so as they all concerned the understanding of the disputed feature (bagasse), i.e. a continuation of the same discussion as in the opposition proceedings (see decision under appeal, point II.9.3 for the absence of a decision by the opposition division on the admittance of D8 and D9).
- 8.7 The board agrees with the appellant that there is no direct and unambiguous disclosure of biomass with a protein content below 2% dry weight in document D1.

Although bagasse may sometimes have a protein content of 1.8%, it has not been shown that this is a constant, inevitable value.



- 8.7.1 Document D8 does not give any information about the protein content of bagasse.
- 8.7.2 In document D9, the tables of chemical composition and nutritional value give ranges of values of crude protein for different types of bagasse. For example, fresh bagasse is shown in the table with an average value of 1.8% with a range of 1.4 to 2.4% over 18 samples, whereas dehydrated bagasse has an average protein content of 2.0% with a range of 0.8 to 4.9% over 13 samples.
- 8.7.3 Documents D11 to D13 show various values for the protein content: 2.65% in D11 (Table 1); 2.1-2.9% in D12 (page 622) and 4.5% in D13 (Table 1).
- 8.7.4 Therefore although the respondent is correct that documents D11 to D13 cannot be regarded as providing the "normal" protein content of bagasse, it is clear that the value varies between samples and it is therefore not inevitable that the use of bagasse will inevitably lead to a material comprising a biomass with a protein content below 2% of its dry weight, even if there are some examples where the protein content is below 2%.
- 8.7.5 As this feature is not disclosed in document D1, the opposition division erred in finding a lack of inventive step in the subject-matter of claim 1 of auxiliary request 6 (now auxiliary request V') over the combination of documents D1 and D2 or D3.
- 8.8 In a second line of argument, presented at the oral proceedings before the board, the respondent put forward that as the feature of a biomass having a

protein content below 2% did not show any technical effect going beyond that of a protein content below 5%, and bagasse clearly had a protein content below 5%, that the subject-matter of claim 1 of auxiliary request V' was in any case not inventive.

- 8.8.1 The appellant argued that from the application as published on page 4, lines 8 to 10, 23 to 31 and page 5, lines 15 to 18 the skilled person understood that the objective technical problem to be solved was to enable the use of alternative fibres whilst ensuring sufficient strength of the product.
- 8.8.2 According to the respondent, the contested patent did not show any association between a low protein content and strength of the packaging unit. In particular, there was no disclosure of any improvement relating to a protein content below 2%, in comparison to a protein content below 5%. As the protein content of bagasse was certainly below 5%, the contested patent did not show any technical effect based on this feature, compared with document D1.
- 8.8.3 The board agrees with the respondent that the application as published does not directly associate a low protein content alone with a specific strength-related property. However, the passage on page 4, lines 30 to 31 as well as page 5, lines 15 to 18 of the application as published, indicate that the use of the low protein content biomass, similarly to the use of recycled paper, allows a packaging unit to be produced using alternative fibres. As the packaging unit is to be "according to the invention", see page 5, lines 15-16, it has to be suitable for products like eggs such that it should exhibit sufficient strength for this purpose.

In addition, the passage on page 4, lines 23 to 31 refers to packaging units made from low protein content biomass raw material, more preferably below 2 % protein content, allowing for the use of different raw materials while improving the sustainable appearance of the resulting packaging units.

- 8.8.4 Therefore the objective technical problem may be regarded as to provide a method for manufacturing a packaging unit which allows for the use of different raw materials, while maintaining the strength of the packaging units, and improving the sustainable appearance of the units.
- 8.8.5 Document D1 does not disclose that the protein content of the non-wood plant raw material has any relevance to the method or products formed, more particularly any relevance to the product appearance or strength. It also does not disclose any protein content values for any of the possible plant raw material mentioned on page 6, lines 1 to 5.

The board is therefore of the view that, even if the respondent's contention were accepted, that a protein content of below 5% gives the same technical effects as a protein content of below 2%, the skilled person seeking to solve the objective technical problem posed, has no reason to purposely choose bagasse from the list of possible plants given on page 6, lines 1 to 5, with the claimed protein content, without knowledge of the claimed invention.

The subject-matter of claim 1 of auxiliary request V' is not obvious in view of the combination of D1 with D2 or D3.

- 8.9 As the subject-matter of claim 1 is inventive based on the feature relating to the protein content of the non-wood lignocellulosic biomass, it is not necessary to consider the further alleged distinguishing feature relating to the consistency of the mouldable pump before forming.
- 8.10 The respondent had no further objections to auxiliary request V'.
- 8.11 Therefore, the patent can be maintained in amended form based on the set of claims of auxiliary request V'.

## 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 the claims of auxiliary request V' filed with the statement of grounds of appeal, and a description to be adapted thereto where necessary.

The Registrar:

The Chairman:



S. Lichtenvort

G. Patton

Decision electronically authenticated