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**Datasheet for the decision
of 29 July 2022**

Case Number: T 1280/21 - 3.3.09

Application Number: 12824749.1

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Language of the proceedings: EN

Title of invention:

BIOPOLYMERS ISOLATED FROM RESIDUAL BIOMASS AND FOSSIL SOURCE;
PRODUCTION PROCESSES AND PRODUCT USE

Applicant:

Università Degli Studi Di Torino

Headword:

Biopolymers/UNIVERSITÀ DEGLI STUDI DI TORINO

Relevant legal provisions:

EPC Art. 108 sentence 3
EPC R. 99(2), 101(1)

Keyword:

Admissibility of appeal - appeal sufficiently substantiated
(no)

Decisions cited:

J 0010/11, T 2117/18



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Case Number: T 1280/21 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 29 July 2022

Appellant: Università Degli Studi Di Torino
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 30 April 2021
refusing European patent application No.
12824749.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman A. Haderlein
Members: C. Meiners
N. Obrovski

Summary of Facts and Submissions

I. Decision under appeal

The appeal was filed by the applicant (appellant) against the decision of the examining division to refuse the European patent application in suit (hereinafter "the application").

The examining division decided that the subject-matter of claim 1 of the then pending request (the set of claims received on 12 January 2018 with the applicant's letter dated 3 January 2018) did not meet the requirements of Articles 123(2) and 84 EPC. The examining division further held that the subject-matter of the then claims 1 to 16 lacked novelty in view of, *inter alia*, documents D1, D2, D4 and D9. Further, the subject-matter of the then claim 17 was held to lack an inventive step in view of the combined disclosure content of documents D1 and D13.

II. Oral proceedings were not requested by the appellant. The board initially issued a summons to oral proceedings pursuant to Rule 115(1) EPC of its own motion. In a communication pursuant to Article 15(1) RPBA 2020 ("the communication"), the board set out its preliminary conclusion that the appeal was very likely to be rejected as inadmissible because the statement of grounds of appeal (1 page) lacked sufficient reasoning as to why the decision under appeal should be set aside.

III. The appellant replied in writing to the board's communication and put forward arguments in support of

its opinion that the appeal was sufficiently substantiated. In a further submission, the appellant announced that it would not be attending the oral proceedings and asked the board to take into account its written comments. The board then cancelled the oral proceedings.

IV. In the present decision, reference is made to the following documents:

- D1 MONTONERI E ET AL: "Acid soluble bio-organic substances isolated from urban bio-waste. Chemical composition and properties of products", WASTE MANAGEMENT, ELSEVIER, NEW YORK, NY, US, vol. 31, no. 1, 2 October 2010 (2010-10-02), pages 10-17, XP027476376, ISSN: 0956-053X, DOI: 10.1016/J.WASMAN.2010.08.029
- D2 CHAI ET AL: "Spectroscopic studies of the progress of humification processes in humic substances extracted from refuse in a landfill", CHEMOSPHERE, PERGAMON PRESS, OXFORD, GB, vol. 69, no. 9, 14 October 2007 (2007-10-14), pages 1446-1453, XP022297768, ISSN: 0045-6535, DOI : 10.1016/J.CHEMOSPHERE.2007.04.076
- D4 WO 2010/094985 A1
- D9 LOUT ET AL: "Photochemical alteration of the molecular weight of dissolved organic matter", CHEMOSPHERE, PERGAMON PRESS, OXFORD, GB, vol. 65, no. 11, 14 June 2006 (2006-06-14), pages 2333-2342, XP027904656, ISSN: 0045-6535
- D13 BRONS ET AL: "Influence of humic acids on the hydrolysis of potato protein during anaerobic digestion", AGRICULTURAL WASTES, vol. 13, no. 2, 1985, pages 105-114, XP055046317, ISSN: 0141-4607, DOI: 10.1016/0141-4607(85)90017-4

V. The appellant's arguments can be summarised as follows:

The processes claimed in the claims filed together with the grounds of appeal were novel and inventive in view of the prior art. The decision of the examining division was not substantiated as regards the refusal of the subject-matter of claims 14 to 16 of the claim set underlying the decision appealed. All steps of claims 1 to 4 as filed with the grounds of appeal could be considered as distinguishing technical features with respect to D1. The decision under appeal recited the original statements from the PCT Written Opinion (which, itself, had not been substantiated) and repeated them without any substantiation. All examination steps had focused on the then claim 1, and the inventor had tried several times to explain to the examiner the technical differences between the claimed subject-matter and the disclosure content of D1.

The applicant had provided several pieces of evidence for the novelty of the subject-matter of the then claim 1.

All past examination communications contained matter which had to be considered "reasons why the decision under appeal is allegedly incorrect".

The deletion of the method for determining the dry-matter content in the claims on file constituted a limitation of the scope of the claims and not a broadening thereof.

VI. Relevant claims

Claim 1 as filed with the statement setting out the grounds of appeal reads:

"Process for remediation of soil contaminated by organic substances and/or polluting metals, comprising the steps of:

- providing a water solution containing a mixture of water soluble biopolymers, said mixture comprising a mineral fraction and an organic fraction and having the following composition expressed as % weight relative to dry matter, the mineral fraction containing the mineral elements Si, Fe, Al, Mg, Ca, K, Na, Cu, Ni, Zn, Cr, Pb, the organic fraction comprising molecules with 5-500 kDalton molecular weight and 6-53 polydispersivity index, said polymeric molecules having aliphatic carbon chains, aromatic carbon, and polar functional groups, free and/or bonded to the above reported mineral elements, said mixture of water soluble biopolymers having the following contents expressed as % weight relative to dry matter: $37 \leq C \leq 65$; $3 \leq N \leq 7$; ashes ≤ 30 ; $Si \leq 3,0$; $Fe \leq 0,9$; $Al \leq 0,8$; $Mg \leq 1,2$; $Ca \leq 6,5$; $K \leq 10$; $Na \leq 10$; $Cu \leq 0,03$; $Ni \leq 0,01$; $Zn \leq 0,05$; $Cr \leq 0,003$; $Pb \leq 0,01$, with the following composition expressed as mole fraction of the specific carbon type over the product total C: $0,3 \leq C_{al} \leq 0,6$; $CN \leq 0,1$; $OMe \leq 0,1$; $0,3 \leq OR \leq 0,6$; $0,02 \leq OCO \leq 0,08$; $0,07 \leq Ph \leq 0,30$; $0,02 \leq PhOH \leq 0,06$; $PhOR/Ar \leq 0,09$; $0,04 \leq COOH \leq 0,12$; $CON \leq 0,12$; $C=O \leq 0,05$, where C_{al} = aliphatic C bonded to H and/or to other aliphatic C and/or to aromatic C, CN = C bonded to amino functional groups, OMe = methoxy C; OR = alkoxy C, OCO = anomeric C, Ph = aromatic C bonded to H and/or to other aromatic C and/or to other aliphatic C, $PhOH$ = phenol C, $PhOR/Ar$ = phenoxy C, $COOH$ = carboxylic C, CON = amide C, $C=O$ = keto C;
- contacting at least once the contaminated soil with the biopolymers solution; and
- separating the soil from the solution, the solution

containing the organic substances and/or the polluting metals, so obtaining soil with reduced contaminant content."

Claim 2 reads:

"Process for secondary treatment of a washing solution recovered from a soil remediation process according to claim 1, comprising the steps of:

- acidifying the recovered washing solution at $\text{pH} < 4$ to obtain a precipitate;
- drying and burning the precipitated material to obtain a metal concentrate to recycle for further use;
- or
- filtering the recovered washing solution through micro-, ultra-, nano-porous and/or dialysis membranes to obtain a retentate and a permeate;
- drying and burning the retentate to obtain a metal concentrate to recycle for further use."

Claim 3 is directed towards a process for cleaning and/or lowering COD of water contaminated by organic substances and/or polluting metals, comprising the steps of:

- providing a mixture of water-soluble biopolymers as specified in claim 1;
- adding the mixture of biopolymers to the contaminated water obtaining a solution; and
- separating the organic substances and/or the polluting metals from the solution through precipitation or filtration through micro-, ultra-, nano-porous and/or dialysis membranes, so obtaining a retentate and a permeate, wherein the permeate is clean water for further use and the retentate is treated further; and
- drying and burning the retentate to obtain a metal concentrate to recycle for further use.

Claim 4 claims a process for inhibiting the mineralisation of organic nitrogen in anaerobic fermentation processes of a biomass, comprising the steps of:

- providing a mixture of water soluble biopolymers as specified in claim 1;
- adding the mixture of biopolymers to the biomass, the biomass being preferably as a water suspension; and
- subjecting to anaerobic fermentation the biomass added with the mixture of biopolymers, so obtaining a digestate and a biogas with reduced content of ammonia.

VII. Requests

The appellant requests that the decision under appeal be set aside and that a patent be granted based on the single set of amended claims filed with the statement setting out the grounds of appeal.

Reasons for the Decision

1. Admissibility of the appeal

- 1.1 Under Article 108, third sentence, EPC, "[w]ithin four months of notification of the decision, a statement setting out the grounds of appeal shall be filed in accordance with the Implementing Regulations." Under Rule 99(2) EPC, "[i]n the statement of grounds of appeal the appellant shall indicate the reasons for setting aside the decision impugned, or the extent to which it is to be amended, and the facts and evidence on which the appeal is based."

- 1.2 The issue of whether the requirements of the provisions indicated in point 1.1 are met has to be decided on the basis of the statement of grounds of appeal and the reasons given in the contested decision. If the appellant submits that the decision under appeal is incorrect, then the statement setting out the grounds of appeal must enable the board to understand immediately why the decision is alleged to be incorrect and on which facts the appellant bases its arguments, without the board first having to carry out investigations of its own (J 10/11, Reasons 2.1).
- 1.3 It is settled case law that the statement of grounds of appeal must set out an appellant's case in a way that is coherent, clear and sufficiently substantiated (Case Law of the Boards of Appeal, 9th edition 2019, Chapter V.A.2.6.3.a). If an application is refused, the statement of grounds of appeal must deal with all grounds for refusal on which the decision under appeal is based (Case Law of the Boards of Appeal, 9th edition 2019, Chapter V.A.2.6.3.c).
- 1.4 The appellant did not indicate any reasons in the statement of grounds of appeal why the decision under appeal is allegedly incorrect.
- 1.5 Even if specific reasons for setting aside the decision under appeal are not provided in the statement of grounds of appeal, the appeal may still be considered sufficiently substantiated in the event of a change in the subject of the proceedings due to the filing of amended claims together with the statement setting out the grounds of appeal. This is subject to the proviso that the reasons for the decision under appeal are no longer relevant in view of the amended claims (Case Law

of the Boards of Appeal, 9th edition 2019, Chapter V.A. 2.6.5.c).

- 1.6 Claims 1 to 4 of the set of claims filed with the statement of grounds of appeal are based on claim 1 in combination with claims 14 to 17 of the set of claims on which the decision under appeal is based, respectively. With regard to the newly filed set of claims, the appellant stated the following concerning novelty and inventive step:

"The now claimed Processes are those which use the mixture as stated in Old Claim 1 for very particular applications, where no prior art can be found, because no one has previously devised such mixture for such types of applications.

Since the Refusal Decision was based only on Claim 1, a reinstatement of the Application is respectfully requested, based on the novelty and inventive steps of the applications of such type of mixture."

- 1.7 Contrary to the appellant's assertion, however, the decision under appeal refusing the application was not only based on the then claim 1. In actual fact, novelty of the subject-matter of the then claims 14 to 16 was also denied in view of the disclosure of documents D1 (see point 5.3 of the decision), D2 (see section 5.4 of the decision) and D4 (see point 5.6 of the decision). Moreover, the subject-matter of the then claim 16 was held to lack novelty over document D9 in point 5.11 of the decision. In addition, the subject-matter of former claim 17 was held not to involve an inventive step in view of the teaching of document D1 in combination with document D13. Consequently, the examining division also

held the specific uses of the water-soluble biopolymers called for in claims 1 to 4 on file to form part of the prior art (claims 1 to 3) or to be obvious to a skilled person (claim 4).

- 1.8 The amendments concerning the deletion of both the method for determining the dry matter and the reference "where N and C mean total nitrogen and carbon distributed over the above described carbon types and functional groups" broaden the scope of the claims. Hence, the grounds for refusal - referred to in point 1.7 above - concerning novelty and inventive step in the decision under appeal apply to the newly filed set of claims as well.
- 1.9 According to Rule 101(1) EPC any deficiency under Article 108, third sentence, EPC and Rule 99(2) EPC can only be remedied before expiry of the time limit for filing the statement of grounds of appeal. After expiry thereof, it is thus no longer possible to remedy the insufficient substantiation of the appeal. Consequently, the appellant's submission dated 23 May 2022 can as such not remedy any insufficient substantiation of the appeal.
- 1.10 The appellant argued in its submission dated 23 May 2022 that the decision under appeal was not substantiated with regard to the refusal of the then claims 14 to 16 due to references to previous communications and also because point 5.3.1 of the reasons indicated in the decision under appeal only contained a conclusion in respect of the then claims 1 and 2.
- 1.11 The board assumes in favour of the appellant that the latter wished to argue that it could not substantiate

its appeal with regard to claims 14 to 16 because the decision under appeal had, itself, not been sufficiently reasoned in that regard. This is, however, not correct.

1.11.1 Firstly, references to previous communications in a decision do not automatically render that decision insufficiently reasoned. This would, for example, additionally require that such references left the board to reconstruct the applicable reasons by piecing together various arguments from the file, or that they left the board in doubt as to which claim version the arguments related to. Neither is applicable in the present case. In sections 5.3 (including point 5.3.1), 5.4, 5.6 and 5.11 dealing with the relevant objections, the decision under appeal does not even contain such a reference to previous communications.

1.11.2 Secondly, the features disclosed in document D1 are listed in point 5.3 of the reasons for the decision under appeal, followed by the conclusion that this document "destroys novelty of subject-matter of claims 1, 2, 4-16".

The text in item 5.3.1 of the decision appealed does indeed indicate additional reasons (besides those put forward in preceding text section 5.3) why the mixtures of water-soluble biopolymers called for in the then claim 1 were not novel vis-à-vis D1. It cannot be argued, however, that section 5.3 of the mentioned decision did not contain references to uses of products that were held to have all the features of the then claim 1. Such uses include e.g. the washing of (hydrocarbon)-contaminated soils or the flocculation of metal oxides. Moreover, it is not apparent to the board why the remaining attacks on novelty and inventive step

(referred to in point 1.7 above), besides the novelty objections put forward vis-à-vis document D1 in the decision appealed, would manifestly be without merit in view of the grounds of appeal.

The additional conclusion contained in point 5.3.1 of the reasons concerning claims 1 and 2 does not therefore render the decision insufficiently reasoned with regard to claims 14 to 16.

1.12 The further arguments put forward in the appellant's submission dated 23 May 2022 essentially constitute an attempt to provide a substantiation of the appeal after expiry of the time limit within which this is actually possible. Therefore, they cannot have an impact on the board's assessment that the appeal was not sufficiently substantiated. This applies, for example, to the - likewise unsubstantiated - allegations that all steps in claims 1 to 4 are distinguishing technical features and that the decision was wrong in stating that the onus of proof to demonstrate that an unusual parameter was a limiting feature was with the applicant.

1.13 The appellant's statement that "all past Examination Communications contain matter which must be considered 'reasons why the decision under appeal was allegedly incorrect'" is obviously incorrect. As far as this statement relates to any submissions made by the appellant during the proceedings before the examining division, the board notes as follows: aside from the fact that the statement of grounds of appeal did not even contain any reference to the appellant's previous submissions during the examination proceedings, such a general reference should, according to settled case law, not be taken into account (cf. T 2117/18, Reasons 2.2.13).

- 1.14 The appellant's further allegation that the examiner "never took really into account the several objections raised in all responses to his Communications" although the patent was "manifestly inventive" cannot retroactively provide any substantiation of the appeal either.
- 1.15 In conclusion, the appellant neither provided reasons why the decision under appeal is allegedly not correct nor filed a new set of claims for which all grounds of refusal are no longer relevant. The appeal is thus not substantiated, contrary to what is required under Article 108, third sentence, EPC and Rule 99(2) EPC.
- 1.16 Under Rule 101(1) EPC, such a deficiency results in the rejection of the appeal as inadmissible.

Order

For these reasons it is decided that:

The appeal is rejected as inadmissible.

The Registrar:

The Chair:



A. Nielsen-Hannerup

A. Haderlein

Decision electronically authenticated