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**Datasheet for the decision
of 11 October 2021**

Case Number: T 0318/18 - 3.2.04

Application Number: 12813027.5

Publication Number: 2760277

IPC: A01G31/00

Language of the proceedings: EN

Title of invention:
PLANT GROWTH SYSTEM

Patent Proprietor:
Rockwool International A/S

Opponents:
Saint-Gobain Cultilene BV
Knauf Insulation SPRL

Headword:

Relevant legal provisions:
EPC Art. 113(1), 116(1), 54(2), 56
RPBA 2020 Art. 11

Keyword:

Right to be heard - substantial procedural violation (no)

Remittal - (no)

Novelty - (yes)

Inventive step - (no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 0318/18 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 11 October 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
5 December 2017 concerning maintenance of the
European Patent No. 2760277 in amended form.**

Composition of the Board:

Chairman A. de Vries
Members: G. Martin Gonzalez
 K. Kerber-Zubrzycka

Summary of Facts and Submissions

- I. The appeals were filed by the appellant-proprietor and by the appellant-opponent 2 against the interlocutory decision of the Opposition Division maintaining the patent in amended form.

The Opposition Division held inter-alia that the subject-matter of granted claim 1 lacked inventive step but the patent as amended according to the auxiliary request 6 before it (auxiliary request 7 in these proceedings) is new and involves an inventive step.

- II. In preparation for oral proceedings the Board issued a communication, dated 4 May 2020, setting out its provisional opinion on the relevant issues.

Oral proceedings were held before the Board by videoconference on 11 October 2021 in the absence of the opponent 1, party as of right, who had announced with letter of 13 September 2021 that they would not attend.

- III. The appellant-proprietor requests that the decision under appeal be set aside and the patent be maintained as granted or alternatively according to auxiliary requests 1-4, 4a, 5-12, all filed on 16 April 2018 with the statement of grounds, where auxiliary request 7 corresponds to auxiliary request 6 in opposition proceedings on the basis of which the patent was maintained.

The appellant-opponent 2 requests that the decision under appeal be set aside and that the European patent No. 2 760 277 B1 be revoked in its entirety.

The opponent 1, party as of right, requests that the appeal of the proprietor be dismissed.

IV. The independent claim 1 according to the requests relevant for the present appeal reads as follows:

(a) Main request (as granted)

"A plant growth system comprising a plant growth substrate comprising a man-made vitreous fibre (MMVF), slab (1) and a single MMVF block (2) on a first surface of the MMVF slab; and an irrigation device (6) for providing water and/or nutrients to the plant growth substrate, wherein the MMVF slab comprises a drain hole (3) arranged to allow fluid to exit the MMVF slab, the drain hole being located in the region of a first end of the slab and being disposed away from the first surface, characterized in that: the irrigation device is arranged to provide water and nutrients to the substrate at a feeding position further than 50% of the length of the slab from the first end, and the block is provided either at the feeding position or between the feeding position and the first end of the slab."

(b) Auxiliary request 1

Claim 1 as in the main request, where a comma has been deleted as follows (strikethrough added by the Board to indicate the amendment):

"A plant growth system comprising

a plant growth substrate comprising a man-made vitreous fibre (MMVF) ~~7~~ slab (1)..."

(c) Auxiliary request 2

Claim 1 as in the first auxiliary request without the last optional feature as follows (strikethrough added by the Board to indicate the amendment):

"... the block is provided ~~either~~ at the feeding position ~~or between the feeding position and the first end of the slab.~~"

(d) Auxiliary request 3

Claim 1 as in auxiliary request 2 with the following amendment (emphasis added by the Board to indicate amendment):

"... the irrigation device is arranged to provide water and nutrients to the substrate at a feeding position further than ~~50%~~60% of the length of the slab from the first end,..."

(e) Auxiliary request 4

Claim 1 as in auxiliary request 3 with the following added feature (emphasis added by the Board to indicate amendment):

"... from the first end,
the centre point of the block is greater than 60% of the length of the slab from the drain hole; and the block is provided..."

(f) Auxiliary request 4a

Claim 1 as in auxiliary request 3 with the following added feature (emphasis added by the Board to indicate amendment):

"... from the first end,
the distance of the centre point of the block is greater than 60% of the length of the slab from the drain hole; and
the block is provided..."

(g) Auxiliary request 5

Claim 1 as in auxiliary request 2 with the following amendments (emphasis added by the Board to indicate amendment):

"... the irrigation device is arranged to provide water and nutrients to the substrate at a feeding position ~~further than 50%~~ in the range 60% to 80% of the length of the slab from the first end, and..."

(h) Auxiliary request 6

Claim 1 as in auxiliary request 5 where the range is further amended to recite "in the range 65% to 80%".

(i) Auxiliary request 7

Claim 1 as in auxiliary request 6 where the range is further amended to recite "in the range 65% to 70%".

(j) Auxiliary request 8

Claim 1 as in auxiliary request 7 with the following added feature (emphasis added by the Board to indicate amendment):

"...from the first end,
the centre point of the block is between 65% and 70% of the length of the slab from the drain hole; and
the block is provided..."

(k) Auxiliary request 9

Claim 1 as in auxiliary request 1 with the following added feature (emphasis added by the Board to indicate amendment):

"...first end, ~~and~~
the block is provided either at the feeding position or between the feeding position and the first end of the slab, and
the volume of the slab is in the range 3 to 11 litres."

(l) Auxiliary request 10

Claim 1 as in auxiliary request 1 with the following added feature (emphasis added by the Board to indicate amendment):

"...first end, ~~and~~
the block is provided either at the feeding position or between the feeding position and the first end of the slab, and
the height of the slab is 85mm to 150mm."

(m) Auxiliary request 11

Claim 1 as in auxiliary request 1 with the following added features (emphasis added by the Board to indicate amendment):

"...the block is provided either at the feeding position or between the feeding position and the first end of the slab, and further comprising a liquid impermeable covering surrounding the MMVF slab, wherein the drain hole is formed by a first aperture in said covering and the MMVF block contacts the MMVF slab through a second opening in said covering."

(n) Auxiliary request 12

Claim 1 as in auxiliary request 1 with the following added feature (emphasis added by the Board to indicate amendment):

"...wherein the MMVF slab comprises a single drain hole (3) arranged to allow..."

V. In the present decision, reference is made to the following evidence:

(D2) EP 0 628 243 A1

(D5a) "What to know about the Uni-Slab", internet publication retrieved from URL: <http://www.grodan101.com/growing-tips/grow/what-know-about-uni-slab>[11/01/2016 15:25:53]

VI. The appellant-proprietor argues as follows:

The impugned decision includes the conclusions of the Opposition Division in respect of inventive step of the main request, while inventive step for the main request was not discussed during the oral proceedings. This violates the appellant-proprietor's right to be heard. It also does so in respect of the conclusions of the Opposition Division for auxiliary requests 3 and 5. The corresponding reasoning and associated documents should not be included in the appeal proceedings.

Alternatively, the case should be remitted. Otherwise, claim 1 of all requests involve an inventive step over the cited prior art documents.

VII. The appellant-opponent 2 and respondent-opponent 1 argue as follows:

There is no procedural violation in the conclusions of the Opposition Division regarding inventive step of the main request. The request fails in any case on novelty. The documents and arguments were thoroughly discussed in writing. Claim 1 of all requests lacks an inventive step in the light of document D2, in combination with common general knowledge.

Reasons for the Decision

1. The appeals are admissible.
2. Background

The invention relates to the growth of plants in artificial substrates, in particular in mineral wool substrates, see specification paragraph [0001]. The claimed system comprises a man-made vitreous fibre

(MMVF) slab and a MMVF block (of smaller size), which contains a germinated plant that is transferred onto a first surface of the MMVF slab to allow further growth of the root system and the plant, see patent specification paragraphs [0003] and [0021]. The slab comprises an irrigation device for providing water and nutrients and a drain hole at one end. The slab further comprises a drain hole located in the region of a first end of the slab. The aim of the invention is to improve the distribution and retention of water and nutrients in the slab for reducing costs and improving plant yield, see paragraph [0020]. To this end, the claimed system comprises a single block, the irrigation device is located further than 50% of the length of the slab from the drain hole end and the single block is located at the feeding position or between the feeding position and the drain hole end. This enables closer control of the water and nutrient properties in the slab and improving nutrient and water refreshment efficiency, see paragraph [0022].

3. Right to be heard and request for remittal

3.1 The appellant-proprietor has alleged a possible violation of their right to be heard regarding admission of document D5a as prior based on web.archive.org cited in the impugned decision, even if they do not submit any request based thereon. In its communication the Board had already opined :
"The Opposition Division in its summons of 20 December 2016 in preparation for the oral proceedings, held almost one year later on 02.10.2017, already indicates under point 3.4.3. that they would rely on the information from web.archive.org, in respect of the contents of D5a. The issue was then discussed during the oral proceedings, see minutes,

page 5. That the division in its decision then refers to other case law in rebuttal of the appellant proprietor's own citation of case law is not a violation of the right to be heard. Case law is not evidence, but forms part of the division's reasoning. As is established case law, see Case Law of the Boards of Appeal, 9th edition 2019 (CLBA) V.B.4.3.5, a party is not entitled in advance to all reasons for a decision in detail. It appears therefore that the patent proprietor has had ample opportunity to present their comments in the sense of Article 113(1) EPC for this piece of evidence. No violation of the right to be heard is apparent in this respect."

As the appellant proprietor refrained from further comment, the Board confirms its preliminary view.

- 3.2 Section 2.13 of the impugned decision includes the conclusion of the Opposition Division that claim 1 of the main request lacks an inventive step. Their reasoning was based on documents and arguments presented and discussed in writing, while inventive step for the main request was not discussed during the oral proceedings. This was the case also for auxiliary requests 3 and 5. The appellant-proprietor submits that their right to be heard has been violated. They request that therefore inventive step for these requests should not be subject of the appeal proceedings. If inventive step must be discussed the case should then be remitted to the first instance.
- 3.3 The Board first notes that even if it were to find that the division had erred seriously in not hearing a party on aspects of the decision there is no legal basis for subsequently disregarding those aspects and any evidence based thereon in the appeal. The only possible

remedies under Article 111(1) EPC are the remittal of the case pursuant to Article 111(1) EPC to the Opposition Division for correction of its error, or for the Board to itself correct the error by exercising its power within the competence of the Opposition Division.

3.4 The Board agrees that a finding of lack of inventive step of claim 1 of the main request in the decision without having heard the proprietor at the oral proceedings on the issue is indeed a procedural violation, cf. Case Law of the Boards of Appeal, Ninth Edition, July 2019 (CLBA), III.B.2.6. It is however not a fundamental deficiency in the sense of Article 11 RPBA 2020, since this request was previously found to be not novel, the novelty issue being duly discussed (pages 4,5 of the minutes). This finding was therefore not causal to the conclusion that claim 1 as granted did not meet the requirements of the EPC, see in this respect CLBA III.B.2.2.

3.5 As regards auxiliary requests 3 and 5, the Division found these requests to lack inventive step over D5a and common general knowledge, see sections 5.4 and 8.4 of the impugned decision. Inventive step starting from D5a for both auxiliary requests was duly discussed during the oral proceedings, see pages 6 and 8 of the minutes. Document D5a had already been discussed in relation to novelty for the main request during the oral proceedings, page 4 of the minutes. The appellant-proprietor had therefore been given the opportunity to present their comments during the oral proceedings on the grounds (lack of inventive step) on which the Division finally based their conclusion that neither request met the requirements of the EPC.

The appellant-proprietor submits further that it can be inferred from the decision that the Opposition Division at the oral proceedings must have already decided lack of inventive step of the main request based on D2 without hearing the proprietor, and that this would have influenced the division when they then heard the parties on auxiliary requests 3 and 5. In the Board's view this is not borne out by the facts of the case as apparent from the minutes and decision. The division had namely already found that the main request was not allowable for lack of novelty (minutes page 5, after 2nd deliberation; decision, point 2.9.2), and was justified in then moving on to the auxiliary requests and hearing the parties on the issues it considered decisive for these. It did so in a manner that was entirely transparent and consistent with its finding of lack of novelty for the main request, as is evident from the decision, points 5.4 and 8.4, and on which the parties were heard, see minutes page 6 and 8. There it found that the features added in those requests did establish novelty over D5a but did not involve an inventive step. It is not apparent to the Board how this finding might be coloured by a (allegedly previous and secret) finding of lack of inventive step starting from D2.

The Board is thus unable to see a violation of the appellant proprietor's right to be heard in the sense of Article 113(1) EPC.

3.6 Otherwise, inventive step was duly discussed and decided for the request which was upheld, and the issue is thus within the framework of the appeal, Art 12(1) RPBA 2020. Many of the documents cited against inventive step by the appellant-opponent in its statement of grounds are those on which the division

duly heard the parties and decided upon on the issue of novelty. All documents apart from D26 were extensively discussed in opposition and again in the submissions of both parties in appeal. At the oral proceedings, the Board therefore saw no special reason in the sense of Art 11 RPBA 2020 for remitting the case.

4. Main request - Inventive Step

4.1 Document D2 has been cited as both prejudicial to novelty and inventive step and is indeed considered a suitable starting point for assessing inventive step. D2 discloses a plant growth system comprising a slab 1, see figure 1, with a drain hole 38 located in the region of a first end and away from the slab's upper surface 37, see D2, column 4, lines 12-14. The system further comprises blocks 2 to be placed on the upper surface of the slab 1, see column 4, lines 27-34. D2 also discloses that a drip irrigation device is customarily provided at the level of each plant to supply nutrient solution, see column 1, lines 10-12. The mineral substrate slab 1 can be made inter-alia of mineral wool. Mineral wool is a man-made vitreous fibre (MMVF), see column 3, lines 44-47. D2 generally discloses that its substrate can be used with a single or multiple blocks depending on the cultivated species, see column 1, lines 8-10 and column 2, lines 16-19: " ... the system .. is meant to receive one or more plants placed on the upper surface ..." (".... le systeme ... est destiné a recevoir un ou plusieurs plants disposés sur la face supérieure,...").

4.2 The appellant proprietor contends that choosing a single block while also choosing mineral wool as material for building the slab from a list of materials represents a specific combination selected from two

lists that is not unambiguously and directly available to the skilled person when reading document D2. They further contend that D2 does not disclose directly and unambiguously a location of the block and the irrigation device as recited in the characterising portion of the claim.

4.3 In respect of the first issue, in the formulation "one or more" "one" is the only specific instance directly and unambiguously disclosed in D2. It is also evident to the skilled reader that this use of the system of D2 with only one plant applies whatever material the block and slab are made of. The skilled person would thus unambiguously contemplate using it as a specifically disclosed embodiment for all variants and combinations of the invention described in D2. Likewise, for the specific embodiment shown in figure 1A document D2 in column 3, lines 43-48, lists five different materials, each of which is thus directly and unambiguously disclosed for that embodiment. The list specifically mentions mineral wool i.e. MMVF, which is thus directly and unambiguously disclosed as a material of which the system shown in figure 1A can be made. As the skilled person understands the use of a single block to apply also to this specific realization of the system of figure 1A, D2 in a reasonable and contextual reading is seen to disclose directly and unambiguously the combination of a slab made of mineral wool with a single block on it. The argument that this combination would be the result of a selection from two lists therefore does not hold.

4.4 As regards the positioning of the block and the irrigation device, D2 discloses that the drip irrigation device is provided at the level of each plant, see column 1, lines 10-12. Thus D2 anticipates

the feature that the block is provided at the feeding position. However, there is no express indication in D2 where to place the single irrigated block 2 and its associated irrigation device. The slab depicted in figure 1A shows three different block positions 370, 371, 372 with block 2 placed at the middle one. The Board would agree that this figure serves primarily to illustrate the stages in the process of placing a block on the slab: a position is first chosen (370) with the rectangular outline indicating an area of the covering or film 3 that is then removed to open a window (position 372), onto which the block is then placed (position 371). Whether, beyond illustrating the process of placement of block, the figure is also meant to provide true, accurate representations of block position on the slab, bearing also in mind the schematic nature of the figure, is unclear. There is thus no direct and unambiguous disclosure of the location of the block and the feeding position in a slab with a single block.

- 4.5 It follows from the above that the subject-matter of claim 1 only differs from the known plant growth system in the location of the feeding position, and thus also of the block, further than 50% of the length of the slab from the first end.
- 4.6 The appellant-proprietor submits advantageous effects associated to the use of a single block and formulates the technical problem accordingly when starting from D2. However, as D2 already describes a single block, it must already benefit from those advantageous effect. These effects only deriving from the use of single block cannot therefore be taken into account for the formulation of the technical problem when starting from D2.

4.6.1 The appellant-proprietor also argues that the position of the irrigation device in combination with the position of the block produces the advantageous effect of providing better electro-conductivity distribution and so improving yield, as stated in paragraph [0134] of the patent. This effect would be shown by the comparative tests of figures 15A, 15B and described in paragraphs [0144]-[0147] of the patent specification.

According to established case law, the nature of a comparison must be such that the alleged advantage is convincingly shown to have its origin in the distinguishing feature. Accordingly, the comparison should be with the closest possible structural approximation to the subject-matter claimed, see CLBA I.D.10.9. In this regard, the comparative tests of figures 15A, 15B do not plausibly show that the advantage in conductivity distribution has its origin in the claimed positions of the block and irrigation point on the slab. This is so because the dimensions of the specimen slabs and the heights at which measurements were made in the two tests leading to the results of figures 15A and 15B (length 50cm against 40cm; heights of 5.0, 3.75, 2.5 and 1.25 cm against 6.8, 5.1, 3.4 and 1.7 cm ; cf paragraphs 0145 and 0146) were different. In addition the results shown in figure 15B appear to be based on a single position of the block and no measurements were made beyond the irrigation point towards the furthest end.

The Board therefore considers that there is no conclusive evidence for associating this advantageous effect to the selected block and irrigation location.

4.6.2 Otherwise, as explained in paragraph [0022] of the patent specification, because the irrigation device is offset from the centre of the slab away from the drain, the path length of water and nutrients is increased. The slab is better replenished, obtaining an improved nutrient refreshment efficiency.

As discussed above there is no disclosure in D2 as to where to place a single block 2 when carrying out the invention according to the variant of one block. The skilled person is thus compelled to choose a placement position of the block on the slab when realising the single block embodiment of D2. The objective technical problem can thus be formulated as finding an optimal position with regard to nutrient refreshment efficiency when positioning a single block on a slab as suggested by D2.

4.7 For the skilled person considering where to best place the single block on the slab figure 1A already provides a clear pointer. Though, as stated, figure 1A is schematic and may well not portray true, accurate positions, nevertheless it suggests to the skilled person in search of suitable positions three candidates - positions 371, 372 and 373 - to consider. The most obvious would be position 371 roughly midway along the slab (from end face 11) because that is where it is shown and this may appeal to the skilled person's sense of symmetry. However, they would most certainly also contemplate trying a position that is off center such as position 372, where the film is already cut out, further away from the first end face 11 of the slab 1. This all the more so as it will be clear to the skilled person, an agricultural engineer with the relevant knowledge of resource management, from straightforward considerations that in this position further away from

the drain (and with the irrigation device placed at the block) more of the slab can be used to retain water and nutrients and thus improve nutrient refreshment efficiency, while in position 373, in contrast, most water and nutrients will more rapidly flow out of the slab through the nearly positioned drain.

Thus the skilled person, seeking for an optimal position of a single block on the slab would as a matter of obviousness consider to also try the off center position 372 suggested by figure 1A of D2. The skilled person would so arrive at an embodiment falling under the scope of granted claim 1 without the need of inventive step.

4.8 The Board thus concludes that granted claim 1 does not involve an inventive step in the sense of Article 56 EPC in the light of D2 in combination with common general knowledge.

5. Auxiliary requests - Inventive step

5.1 The block of the system described in D2 is also provided at the feeding position. Thus, auxiliary request 1 (only deletes a comma with respect to the main request) and auxiliary request 2 (only restricted to the option of the block being provided at the feeding position) lack inventive step starting from D2 for similar reasons as the main request.

5.2 Auxiliary requests 3, 4, 4a, 5-8 limit the feeding position and the centre point of the block to further than 60%, or in the range 60%-80% or 65%-80% or 65%-70% of the length of the slab from the drain hole, i.e. to ever narrower ranges at the far end of the block.

The appellant-proprietor submits that the selected ranges have the advantageous effect of providing a further improved electro-conductivity distribution, based on the comparative tests of figures 15A, 15B, described in paragraphs [0144]-[0147]. However as stated in section 4.6.1 above, because the tests of figures 15A, 15B were not conducted with identical slabs or sufficient measurements they cannot conclusively prove a special effect associated with the ranges claimed. Moreover, for figure 15B, see paragraph [0146], the block was placed at only a single position. How specific *ranges* can be inferred from such a single position is a mystery to the Board. As the Board cannot associate any particular effect with these ever narrower ranges they must be considered technically arbitrary and thus cannot contribute to inventive step.

Therefore the subject-matter of claim 1 of auxiliary requests 3, 4, 4a, 5-8, also lacks an inventive step starting from D2 as closest prior art.

5.3 Auxiliary requests 9 and 10 limit the slabs to between 3 to 11 litres of capacity or a height of 85 to 150 mm.

As above on the basis of the information provided in the patent the Board is unable to associate any special effect with these values. At best they are the result of routine dimensioning to meet set requirements, for example storage requirements or marketing concerns.

Therefore the subject-matter of claim 1 of auxiliary requests 9 and 10 also lacks an inventive step starting from D2 as closest prior art.

- 5.4 The features added in auxiliary requests 11 and 12 are immediately apparent from D2: a single drain hole 38, impermeable (polymeric) covering 3, see column 2, lines 19-20, cut out at 372, figure 1A. As they are already known from D2 they cannot contribute to inventive step. Therefore the subject-matter of claim 1 of these requests also lacks an inventive step over D2 in combination with common general knowledge.
6. For the above reasons the Board finds that the decision was wrong in concluding inventive step for the upheld claims version and that therefore it must be put aside. Furthermore, taking into consideration the amendments made by the respondent-proprietor, the patent and the invention to which it relates do not meet the requirements of the Convention and the patent must be revoked pursuant to Article 101(3)(b) EPC.

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:



G. Magouliotis

A. de Vries

Decision electronically authenticated