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Datasheet for the decision of 23 January 2023

Case Number: T 2818/19 - 3.2.03

Application Number: 12863238.7

Publication Number: 2799801

IPC: F27D15/02, B07B4/08, C04B7/47

Language of the proceedings: EN

Title of invention:
BULK-MATERIAL COOLING DEVICE AND BULK-MATERIAL COOLING METHOD

Patent Proprietor:
Kawasaki Jukogyo Kabushiki Kaisha

Opponents:
thyssenkrupp Industrial Solutions AG
IKN GmbH Ingenieurbüro-Kühlerbau-Neustadt

Headword:

Relevant legal provisions:
RPBA Art. 12(4)
RPBA 2020 Art. 13(2)
EPC Art. 54, 56, 100(c), 123(2)

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It can be changed at any time and without notic

Keyword:
Late-filed request - procedural economy - admitted (yes)
Late-filed facts - request could have been filed in first instance proceedings (yes) - admitted (no) - submitted with the statement of grounds of appeal
Amendment after summons - exceptional circumstances (yes) - taken into account (yes)
Novelty - main request (yes)
Inventive step - common general knowledge - main request (yes)
Grounds for opposition - fresh ground for opposition (yes)
Amendments - extension beyond the content of the application as filed (no)

Decisions cited:
G 0010/91

Catchword:

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Case Number: T 2818/19 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 23 January 2023

Appellant: (Patent Proprietor)	Kawasaki Jukogyo Kabushiki Kaisha 1-1, Higashikawasaki-cho 3-chome Chuo-ku Kobe-shi, Hyogo 650-8670 (JP)
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Appellant: (Opponent 2)	IKN GmbH Ingenieurbüro-Kühlerbau-Neustadt Herzog-Erich-Allee 1 31535 Neustadt a. Rübenberge (DE)
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Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 16 August 2019 concerning maintenance of the European Patent No. 2799801 in amended form.**

Composition of the Board:

Chairman	G. Patton
Members:	R. Baltanás y Jorge
	D. Prietzel-Funk

Summary of Facts and Submissions

I. European patent No. 2 799 801 B1 relates to a "*bulk-material cooling device and bulk-material cooling method*".

II. Two oppositions were filed against the patent, which were based on Articles 100(c) EPC and 100(a) EPC in conjunction with Articles 54 EPC and 56 EPC.

III. The present appeal is against the interlocutory decision of the Opposition Division which found that the third auxiliary request filed during oral proceedings fulfilled the requirements of the EPC.

IV. This decision was appealed by the two opponents and by the patent proprietor. Since all parties are therefore simultaneously appellant and respondent, they will be referred to herein as opponents (1 and 2) and patent proprietor respectively, for the sake of simplicity.

V. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2020), the Board indicated its preliminary opinion on the main request (claims as granted) and eight auxiliary requests, the latter submitted with the statement setting out the grounds of appeal. In response to this communication, the patent proprietor filed additional "auxiliary requests 1 to 3 new" with the letter dated 31 August 2022 which were to precede the other auxiliary requests already on file.

Oral proceedings were held on 23 January 2023.

VI. Requests

At the end of the oral proceedings, the patent proprietor withdrew the then main request (claims as granted) and made "auxiliary request 1 new" filed with the letter dated 31 August 2022 the new main request. They requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims of the new main request.

Opponent 1 and opponent 2 requested that the decision under appeal be set aside and the patent be revoked.

VII. Claim 1 of the main request, including the numbering of its features as adopted by the parties, reads as follows (the amendments objected to are marked in bold):

M1.1 *A **cement clinker ~~bulk material~~** cooling device (5) for cooling down a bed of a **cement clinker (90) discharged from a kiln (4) ~~bulk material~~** while conveying the bed of the **cement clinker (90) ~~bulk material~~**, the **cement clinker ~~bulk material~~** cooling device comprising:*

M1.2 *a fine grain separating part (102) configured to feed cooling air flowing upward to the bed of the **cement clinker ~~bulk material~~**, and by the cooling air, selectively separate fine grains in the bed of the **cement clinker ~~bulk material~~** to an upper side of the bed;*

M1.3 *and a rear-stage cooling part (103) provided downstream from the fine grain separating part (102) and configured to feed cooling air to the bed of the **cement clinker ~~bulk material~~**,*

M1.4 *the cooling air having a flow rate per unit area less than the flow rate per unit area of the cooling air fed at the fine grain separating part;* ***characterized by***

M1.5 *a receiving part (11) provided upstream from the fine grain separating part (102) and configured to receive the* ***cement clinker (90)*** ~~***bulk material***~~*,*

M1.6 *wherein the receiving part constitutes a front-stage cooling part (101) configured to feed cooling air flowing upward to the* ***cement clinker (90)*** ~~***bulk material***~~*.*

M1.7 ***wherein the flow rate per unit area of the cooling air (A2) at the fine grain separating part (102) is less than the flow rate per unit area of the cooling air (A1) at the front-stage cooling part (101).***

Independent method claim 3 of the main request, including the numbering of its features as adopted by the Board, reads as follows (the amendments objected to are marked in bold):

M3.1 *A* ***cement clinker*** ~~***bulk material***~~ *cooling method of cooling down a bed of a* ***cement clinker (90) discharged from a kiln (4)*** ~~***bulk material***~~ *while conveying the bed of the* ***cement clinker (90)*** ~~***bulk material***~~*, the method comprising:*

M3.2 ***a front-stage cooling step of feeding cooling air flowing upward to the cement clinker (90) that has been received by a receiving part (11);***

M3.3 *a fine grain separating step of feeding cooling air flowing upward to the bed of the* ***cement clinker (90)*** ~~***bulk material***~~*, and by the cooling air, selectively separating fine grains in the bed of the* ***cement clinker (90)*** ~~***bulk material***~~ *to an upper side of the bed* ***after the front-stage cooling step,***

M3.3a ***the cooling air having a flow rate per unit area less than the flow rate per unit area of the cooling air fed in the front-stage cooling step;***

M3.4 *and a rear-stage cooling step of feeding cooling air to the bed of the* ***cement clinker (90)*** ~~***bulk material***~~ *after the fine grain separating step,*

M3.5 *the cooling air having a flow rate per unit area less than the flow rate per unit area of the cooling air fed in the fine grain separating step.*

VIII. Originally filed claim 1 reads as follows:

A bulk material cooling device for cooling down a bed of a bulk material while conveying the bed of the bulk material, the bulk material cooling device comprising:

a fine grain separating part configured to feed cooling air flowing upward to the bed of the bulk material, and by the cooling air, selectively separate fine grains in the bed of the bulk material to an upper side of the bed;

and a rear-stage cooling part provided downstream from the fine grain separating part and configured to feed cooling air to the bed of the bulk material,

the cooling air having a flow rate per unit area less than the flow rate per unit area of the cooling air fed at the fine grain separating part.

Originally filed claim 5 reads as follows:

The bulk material cooling device according to any one of claims 1 to 4, wherein the bulk material is cement clinker, and the receiving part receives the cement clinker from a kiln for sintering cement raw meal.

Originally filed independent method claim 6 reads as follows:

A bulk material cooling method of cooling down a bed of a bulk material while conveying the bed of the bulk material, the method comprising:

a fine grain separating step of feeding cooling air flowing upward to the bed of the bulk material, and by the cooling air, selectively separating fine grains in the bed of the bulk material to an upper side of the bed;

and a rear-stage cooling step of feeding cooling air to the bed of the bulk material after the fine grain separating step,

the cooling air having a flow rate per unit area less than the flow rate per unit area of the cooling air fed in the fine grain separating step.

IX. The first sentence of paragraph [0008] of the patent has been amended as follows:

That is, a ~~***bulk material***~~ *cooling device according to* ~~***the present invention***~~ ***claim 1*** *is a device for cooling* [...]

The first sentence of paragraph [0014] of the patent has been amended as follows:

A ~~***bulk material***~~ *cooling method according to* ~~***the present invention***~~ ***claim 3*** *is a method of cooling* [...]

X. Prior art

The following documents have been cited, both in the statements setting out the grounds of appeal and during the opposition proceedings, and are relevant to this decision:

D2: WO 2007/141307 A2

D5: US 3,831,291 A

D6: HARDER J: "Latest trends in clinker cooling", ZKG INTERNATIONAL, No.3-2011 , pages 32-42, XP001561553

D11: DE 31 31 514 C1

D12: Dipl.-Ing. K. von Wedel (1988-09-08): "Performance of IKN grate coolers", Cement International, 2/2007, vol. 5, pages 96-103, XP055463767,

Opponent 2 filed the following further document of relevance to this decision with the letter dated 2 June 2020:

D19: "Reference Guide for Process Performance Engineers", Holcim Group Support Ltd, 1st Edition, Version Nov. 2004

XI. Opponent 1's arguments concerning the main request can be summarised as follows:

(a) Admittance of the (new) main request - Article 13(2) RPBA 2020

The main request was filed on 31 August 2022 , i.e. after notification of the summons, was thus late filed and should not be admitted into the proceedings. There is no apparent reason for the delay in filing the request.

(b) Added subject-matter - Article 123(2) EPC

Claim 1 involved an unallowable intermediate generalisation since it encompassed cooling devices which do not necessarily correspond to the one originally disclosed in connection with added features M1.7/M3.3a (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit area of the cooling air at the front-stage cooling part). Paragraph [0041] of the A1 publication corresponding to the originally filed application disclosed the advantages of the added feature only when using the cooling device of the disclosed particular embodiment.

(c) Novelty - Article 54(2) EPC

Document D12 disclosed a cement clinker cooling device produced by IKN and comprising three sections (Eta, Alpha and Lambda). The document states that IKN had

followed the "tradition" of reducing the air load - which is a way of referring to the air flow rate per unit area in this technical field, expressed in Nm/s - with temperature. This was disclosed on page 102, third paragraph of the left-hand column, despite the concept of "air density" having somehow been confused with "air load" by the author, a confusion which was obvious to the skilled person in view of their common general knowledge. Even if the same passage of D12 disclosed that more air could also be supplied, this was a mere alternative to the contrary "traditional" system disclosed. The lack of flow regulation means disclosed on page 100, left-hand column, fifth sentence of the third paragraph did not imply that the flow rate per unit area was constant over the sections, since this was not a necessary condition and, moreover, the cited flow regulation means were meant to influence the air distribution across the width of the cement clinker bed (as was obvious from the same sentence, and also from page 98, last sentence before point 2).

The teaching about the "traditional" distribution of air flow per unit area applied to all sections of the cooling device disclosed in D12, and not only to the Lamdba section. This was evident from the fact that the bed depth at the region of the Eta section where the cement clinker landed was thicker (page 97, left column, last paragraph), whereas bed pressure had to be close to the weight of the bed (page 98, paragraph below Figure 5). Thus, a higher air pressure was necessary at the beginning of the cooling device.

Finally, any upstream air flow would imply a separation of certain particles within the cement clinker bed. Even if the air load was disclosed in D12 as being reduced along the cement clinker bed, this could not

result in a lack of separation at the Eta and Alpha sections. Thus, both the final part of the Eta section and the Alpha section as a whole anticipated the claimed fine grain separating part.

(d) Inventive step - Article 56 EPC

The subject-matter of claim 1 differed from D12 in feature M1.7 (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit area of the cooling air at the front-stage cooling part).

The technical effect of the distinguishing feature was that energy was saved in terms of cooling. Thus, the objective technical problem could be defined as reducing operational costs.

D12 itself included a hint for the skilled person as to how to solve this problem, as page 102, left-hand column, third paragraph disclosed that air load can be reduced with temperature for this purpose. Furthermore, D12, page 98, right-hand column, third paragraph disclosed that bed resistance was decreased at the end of the Eta section. The skilled person was thus aware that air flow could be reduced in the Alpha section since the bed resistance was lower.

XII. Opponent 2's arguments concerning the main request can be summarised as follows:

(a) Admittance of the main request - Article 13(2) RPBA 2020

The current main request was only filed after notification of the summons. It could and should have

been filed with the statement setting out the grounds of appeal. The amendments in claim 3 of auxiliary request 3 filed with the statement setting out the grounds of appeal (having now been amended in claim 3 of the main request) were not solely a clerical mistake since the patent proprietor changed the wording with regard to the first auxiliary request dealt with in the contested decision.

Furthermore, point 6 of opponent 2's submissions dated 27 May 2020 included objections against auxiliary request 3, which should have prompted the patent proprietor to respond at an earlier stage of the procedure.

(b) Added subject-matter - Articles 100(c) EPC and 123(2) EPC

The replacement of the feature "*bulk material*" by "*cement clinker*" in claim 1 (features M1.1, M1.2, M1.3, M1.5 and M1.6) resulted in an unallowable extension of subject-matter. Furthermore, the addition of the feature "*cement clinker discharged from a kiln*" in feature M1.1 also resulted in an unallowable intermediate generalisation, since originally filed claim 5 only disclosed "*cement clinker from a kiln* ***for sintering cement raw meal***" (emphasis added) and included the kiln in the claimed device, in contrast to current claim 1. The same objections applied to method claim 3, which was not even in a position to benefit from the disclosure of any originally filed dependent method claim in this respect.

Furthermore, added feature M1.7/M3.3a (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit

area of the cooling air at the front-stage cooling part) was originally disclosed only in connection with the cooling device of the particular embodiment, as disclosed in the first sentence of paragraph [0040]. Thus, the skilled person reading the originally filed application understood that all features of the particular embodiment which had an impact on the provision of the different flow rates at the fine grain separating part and the front-stage cooling part were essential for the invention. Such essential features encompassed all aspects related to producing and guiding the air flow as detailed in paragraphs [0034] (particular slits at an inclined surface and at moving grates), [0036] (particular cooling fans), [0037] (moving grates combined with particular cooling fans), [0038] (particular arrangement of rear-stage cooling part and fine grain separating part; cooling fans taking air from the atmosphere; air flow direction) and [0041] (distribution of cement clinker bed). It followed that the omission of these essential features in claim 1 of the main request resulted in an unallowable intermediate generalisation.

(c) Novelty - Article 54(2) EPC

The penultimate sentence in the paragraph below Figure 5 of D12 did not imply that the flow rate per unit area was the same in the Eta and Alpha sections. The reference to a "fan reserve" to be used in the Eta section (page 97, right column, middle of last paragraph) disclosed that the flow rate per unit area at the location where cement clinker landed was higher than at the subsequent portions of the bed. The limit for the flow rate per unit area at that location was disclosed in the paragraph below Figure 5 ("*bed pressure close to the weight of the bed*"). If the flow

rate per unit area were higher than this, then the whole material would fluidise, resulting in a chaotic distribution. The aeration in the subsequent Alpha section was disclosed as "gentle" (page 100, first sentence of the paragraph above Figure 7) in comparison to that of the preceding Eta section, which implied that it was below the limit previously disclosed.

The "tradition" disclosed in D12 (page 102, first sentence of the third paragraph below Figure 12) consisted of reducing the air load along the cement clinker bed, as was obvious when interpreting the sentence in the light of the skilled person's common general knowledge. Page 11 of D19 also disclosed that this tradition was common general knowledge for the kind of devices found in D12, as confirmed by the coincident value of 1 Nm/s in the middle of this page and in the third paragraph below Figure 6 of D12. Furthermore, the presence of an air distribution system in the cooling device of D12 was also disclosed on page 34 of D6, right-hand column, second paragraph.

The mention of a "single drive" in the second paragraph below Figure 12 of D12 concerned the drive for the longitudinal transport of the cement clinker bed, as was obvious from the reference to "retention time", and it was consequently irrelevant to the air flow rate per unit area.

The contested claims did not rule out separation of the fine grains also being able to happen at the receiving part (feature M1.5/M3.4), something which would actually be unavoidable in view of its higher flow rate per unit area (features M1.7/M3.3a). Thus, D12 disclosed a receiving part as defined in claim 1 formed by the landing location of the cement clinker which was

followed by a fine grain separating part according to feature M1.2/M3.3.

D11 also disclosed a decreasing flow rate per unit area in column 4, lines 45 to 49. Figure 1 disclosed an increasing depth of the cement clinker bed. As air pressure was constant below the bed, the increase in the bed depth resulted in a lower flow rate per unit area along the bed, as in claim 1 of the contested patent.

The presence of a different number of fans allocated to each region in Figure 2 of D2 revealed a lower flow rate in region 20b. The bigger fan downstream from the cyclone 23 in the same figure confirmed the relevance of the relative sizes and number of fans in the figures. A comparison between Figures 1 and 2 of D2 implied that the higher number of fans in Figure 2 disclosed a higher flow rate at section 20a.

(d) Inventive step - Article 56 EPC

The objective technical problem in view of distinguishing feature M1.7/M3.3a was to increase energy efficiency. The same technical problem was disclosed in D12, page 102, left-hand column, and therefore the skilled person, using their common general knowledge, would know that the solution would involve the flow rate having to be reduced from one section to another of D12. This aspect formed part of the common general knowledge as confirmed by D19, which disclosed on page 11 that the flow rate per unit area "*is usually decreasing from the clinker inlet towards the outlet*". The coincidence in the value of 1 Nm/s for the air load in D12 and D19 indicated to the skilled

person that both documents concerned the same kind of cooling devices.

Alternatively, D5 could provide the skilled person with the teaching needed to arrive at the claimed invention, since it also addressed the problem of increasing energy efficiency (lines 5 to 8 of column 2), and did so by providing the claimed solution.

(e) Admittance of objections about lack of disclosure - G 10/91 and Article 12(4) RPBA 2007

The interpretation of claim 1 according to which fine grain separation did not take place in the receiving part only became known at the oral proceedings before the Opposition Division. This justified the objection about lack of disclosure being raised for the first time with the statement setting out the grounds of appeal.

(f) Admittance of the amended description - Article 13(2) RPBA 2020

The amended description was late filed at the oral proceedings before the Board. It could and should have been filed with the statement setting out the grounds of the appeal. The amended description represented an amendment to the appeal case, since the description played a role in the interpretation of the claims for determining the scope of protection conferred by the patent according to Article 69 EPC.

XIII. The patent proprietor's arguments concerning the main request can be summarised as follows:

(a) Admittance of the main request - Article 13(2) RPBA 2020

The main request was filed in response to the particular problem hinted at by the Board in point 21 of its communication under Article 15 RPBA 2020 regarding the position and wording of feature M3.6 and the resulting possible lack of clarity of claim 3 of auxiliary request 3. This problem was merely the consequence of a clerical mistake which had been corrected by the new wording of claim 3. None of the opponents raised this point in their written submissions.

The amendments did not result in a shift in the focus of the debate since claims 1 and 3 still concerned the same subject-matter which was under discussion. They resulted in a more streamlined discussion since the subject-matter of independent claims 1 and 3 was now aligned, contrary to the previous auxiliary request 1 filed with the statement setting out the grounds of appeal.

(b) Added subject-matter - Articles 100(c) EPC and 123(2) EPC

The skilled person understood from the originally filed application that the invention was intended for the production of cement clinker (paragraphs [0001] and [0005] of the A1 publication). Thus, there was no reason for surprise when claim 1 was amended to limit its scope to cooling devices for such material.

The particular type of kiln from which the cement clinker was supplied did not have an effect on the features of the cooling device and was not limiting for the invention.

The originally filed application disclosed that the control of air flow rates in a cooling device was at the heart of the invention. Originally filed claim 1 disclosed a relationship between the air flow rates of the fine grain separating part and the rear-stage cooling part. Paragraphs [0009], [0010] and [0011] of the A1 publication also disclosed the relevance of managing air flow rates to the invention. Consequently, the skilled person reading paragraph [0040] would understand that the relationship between the air flow rates per unit area in feature M1.7/M3.3a was not inextricably linked to specific parts of the disclosed cooling device such as fans, moving grates, etc.

(c) Novelty - Article 54(2) EPC

Claim 1 required three parts with differentiated functions: a receiving part where cement clinker was cooled as fast as possible (features M1.5 to M1.7, M3.2 and M3.3a), a fine grain separating part where fine grains were separated in the bed which was formed in the receiving part (feature M1.2/M3.3) and a rear-stage cooling part where the separated bed was cooled in a slower manner (features M1.3, M1.4, M3.4 and M3.5). Even if some movement of the particles could take place in the receiving part, the result would not be a separated bed as was the case in the fine grain separating part.

D12 disclosed that separation took place in the Eta section, a receiving part as defined in claims 1 and 3

thus being absent. The subsequent Alpha section could not be regarded as a fine grain separating part since separation already took place in the Eta section.

Furthermore, D12 did not disclose teaching about different flow rates per unit area along the cooling device. Page 97, right-hand column, second paragraph, lines 5 to 7 taught away from strong aeration in the Eta section, as did the last paragraph of the same column. In fact, no flow rate regulation means were present in the cooling device of D12, as disclosed on page 98, last two sentences before point 2, and on page 100, third paragraph below Figure 6, lines 5 to 8. The presence of single drive means and a bed of constant depth (page 102, left-hand column, second paragraph) confirmed that there was no active control of flow rates. The disclosure of "gentle aeration" of the Alpha section (page 100, first sentence of third paragraph below Figure 6) merely meant that - as was the case in the Eta section - no strong aeration was provided there while maintaining the separation achieved in the Eta section.

Page 102, left-hand column, third paragraph did not imply the use of different flow rates in the various sections of D12 since nothing was disclosed about the flow rate per unit area. All that was provided was some considerations about the relationship between air load/ air density and temperature, but these parameters were not the only ones defining the flow rate per unit area. Moreover, the preceding paragraph on page 102 disclosed that the air load could be adjusted for a whole device, but not from one section to another, as was also disclosed in point 4.3. This was confirmed by D6, which disclosed in the first two paragraphs in English of page 34 that the cooling devices of the (fourth)

generation of cooling devices, which replaced those of D12 (i.e. the third generation), **introduced** means for controlling aeration, thus implying that the device of D12 did not comprise these.

The disclosure of a bed pressure "close to the weight of the bed" on page 98, paragraph before point 2 applied to the whole of the Eta section, including both the location where the cement clinker landed and the subsequent portion of the Eta section, which was interpreted as a "fine grain separating part" by the opponents.

D11 did not disclose any details about different flow rates per unit area being fed at different sections, but merely two sections where the same air pressure was applied to the bed. Furthermore, the passage in column 4, lines 45 to 49 cited by opponent 2 concerned the speed of the cooling air, not the flow rate.

D2 did not include any teaching about feeding different flow rates per unit area in the three claimed parts.

(d) Inventive step - Article 56 EPC

The disclosure in D12, page 102, left-hand column, third paragraph only concerned the Lambda section, not the preceding Eta and Alpha sections. Therefore, the skilled person would not be prompted thereby to modify the flow rate per unit area in these sections.

Furthermore, it cannot be derived from the reference to "bed resistance" on page 98, last paragraph before point 2 that more air had to be supplied at the beginning of the cooling device to improve energy

efficiency, which was the objective technical problem solved by the distinguishing feature M1.7/M3.3a.

Document D19 could not be considered proof of common general knowledge in the field of cooling devices of the kind where fine grain separation was achieved, since this document did not contain any reference thereto. It constituted at most general teaching about other cooling devices.

Document D5 did not disclose providing a higher flow rate per unit area in the receiving section. The same air pressure was applied to the whole of the first section (21), the material landing in a first portion thereof and the fine grain separation taking place immediately afterwards.

Finally, modifying the flow rate per unit area as in claim 1 would go against the general teaching of D12. Page 97, right-hand column, second and third paragraphs disclosed that air flow should not be too strong in the Eta section for reasons of wear prevention. Page 100, third paragraph below Figure 6 discloses that aeration in the subsequent Alpha section had to be strong enough to maintain the separation of the fine grains which had been achieved in the Eta section. Thus, the skilled person would have no incentive to increase the air flow in the Eta section or to decrease it in the Alpha section.

(e) Admittance of objections about lack of disclosure - G 10/91 and Article 12(4) RPBA 2007

The objections could and should have been raised in the opposition proceedings and should therefore not be admitted due to being late filed. The objections

represented a new ground for opposition which could only be introduced in the appeal proceedings with the permission of the patent proprietor, which was however not given.

(f) Admittance of the amended description - Article 13(2) RPBA 2020

Amending the description in order to adapt it to the allowable claims was common practice and did not represent any amendment of the case under Article 13 RPBA 2020.

Reasons for the Decision

1. Applicable legal basis concerning the RPBA

The revised Rules of Procedure of the Boards of Appeal (RPBA 2020) entered into force on 1 January 2020. Subject to the transitional provisions (Article 25 RPBA 2020), the revised version also applies to appeals pending on the date of entry into force.

In the present case the statements setting out the of grounds of appeal were filed before 1 January 2020 and the replies thereto were filed in due time. Thus, Article 12(4) to (6) RPBA 2020 does not apply, and instead Article 12(4) RPBA 2007 applies to the **statements of grounds of appeal** and the **replies** (Article 25(2) RPBA 2020).

It follows from the above that Article 13(2) RPBA 2020 applies to amendments to a party's appeal case made

after notification of the summons to oral proceedings (Article 25(3) RPBA 2020).

2. Admittance of the main request - Article 13(2) RPBA 2020

2.1 The main request maintained at the end of the oral proceedings before the Board corresponds to the "auxiliary request 1 new" filed after notification of the summons to oral proceedings.

Claims 1 and 2 of this request correspond to claims 1 and 2 of auxiliary requests 1 and 3 filed with the patent proprietor's statement setting out the grounds of appeal, and also to claims 1 and 2 of the auxiliary request 1 which was dealt with in the contested decision.

Claim 3 of the current main request is based on claim 3 of auxiliary request 3 filed with the statement setting out the grounds of appeal, and corresponds to claim 3 of auxiliary request 1 which was dealt with in the contested decision.

2.2 In the communication according to Article 15 RPBA 2020, the Board had raised an objection concerning the clarity of claim 3 of auxiliary request 3 filed with the statement setting out the grounds of appeal, which resulted in the Board raising a further objection against the admittance of this request in the appeal proceedings.

None of the opponents had ever previously raised the objection against clarity in their written submissions.

2.3 Both opponents argued that the main request could and should have been filed with the statement setting out the grounds of appeal.

This is not convincing since the annex to the Board's communication was the first occasion when the issues related to clarity in connection with the amendments made to claim 3 of auxiliary request 3 filed with the statement setting out the grounds of appeal were mentioned. The patent proprietor had no reason to amend claim 3 to address this issue before they were made aware of it. The objections raised by opponent 2 against auxiliary request 3 included in point 6 of their submissions dated 27 May 2020 did not anticipate the clarity issue mentioned by the Board.

Whether or not the amendments in claim 3 of auxiliary request 3 filed with the statement setting out the grounds of appeal were the result of a clerical mistake is immaterial in this respect. The critical point is that the objection to which the patent proprietor responded by filing "auxiliary request 1 new" on 31 August 2022 (now main request) became known for the first time when the Board issued its communication under Article 15 RPBA 2020.

2.4 Claim 3 of auxiliary request 1 filed with the statement setting out the grounds of appeal was identical to granted claim 3 (i.e. feature M3.3a was missing). Thus, the subject-matter of claims 1 and 3 of this auxiliary request 1 was not aligned.

In contrast, the subject-matter of claim 3 of "auxiliary request 1 new" filed on 31 August 2022 (now main request) has been aligned with that of claim 1,

thus streamlining the discussion since just a single invention has to be discussed.

No shift in the focus of the discussion is caused by the amendment of claim 3, since it concerns the same subject-matter as auxiliary request 1 (dealt with in the contested decision) which was renamed auxiliary request 3 in the statement setting out the grounds of appeal. Furthermore, the invention of claim 3 of the now main request basically amounts to use of the device claimed in claim 1.

Consequently, admitting the "auxiliary request 1 new"/ main request into the appeal proceedings does not result in a shift of the technical discussion, does not introduce any new issue which has not yet been discussed, and actually simplifies the debate.

2.5 In view of the above, the Board considers that there are exceptional circumstances which have been justified with cogent reasons, leading the Board to use its discretion in the matter of admittance of the main request according to Article 13(2) and (1) RPBA 2020.

3. Added subject-matter - Articles 100(c) EPC and 123(2) EPC

3.1 Features of granted claim 1 - Article 100(c) EPC

3.1.1 No new arguments have been put forward during the oral proceedings concerning the features of granted claims 1 and 3 which were objected to in the written submissions of opponent 2. The Board thus remains of the same opinion as advanced in its communication.

3.1.2 In said communication, opponent 2's arguments were not found to be convincing, as follows.

The originally filed application concerned "*a device for and a method of cooling down a bed of bulk material* ***such as cement clinker***" (emphasis added; see A1 publication of the European patent application, paragraph [0001]). The technical problem addressed by the invention was formulated in the originally filed application specifically with regard to cement clinker cooling (see paragraph [0005]), thus confirming that this was an intended use of the device and method of the invention. The skilled person was not confronted with new technical information when the originally claimed device and method for "bulk material" were amended to specify that this bulk material was actually "cement clinker", since this was a declared aim of the invention as disclosed in the introductory portion of the patent application.

Contrary to the opinion of opponent 2, the "*kiln for sintering cement raw meal*" was not part of originally filed claim 5, since this claim merely defined that the receiving part of the cooling device received the cement clinker from such a kiln (i.e. it must be suitable for it: "*the receiving part receives the cement clinker from a kiln for sintering cement raw meal*"). The skilled reader understands that a kiln cannot be an element of a cooling device, since it performs the opposite function, and would interpret original claim 5 in this way in spite of its unclear wording.

Furthermore, the feature "*discharged from a kiln*" finds support in the application as a whole, since the use of the cooling device for cooling cement clinker implies

to the skilled reader that the cooling device must be arranged downstream from the production steps of a cement clinker production facility, in which the kiln forms the final step. This is confirmed by originally filed claim 5, the particular embodiments of the patent application, and the discussion of the prior art in paragraph [0002] of the A1 publication, second sentence.

The omission of the feature "*for sintering cement raw meal*" in connection with the kiln does not result in an unallowable intermediate generalisation, since the particular type of kiln does not have an effect on the features of the cooling device and is thus not limiting. Claim 1 of the main request defines a cooling device which must be **suitable** for treating cement clinker discharged from any kiln whatsoever. The fact that the kiln is of a particular type does not play a role in the features of the claimed cooling device, and the lack of definition of the kiln cannot thus constitute an extension of subject-matter, since the same cooling device could be used for any kiln.

Consequently, no unallowable extension of subject-matter can be ascertained with regard to the granted features which were objected to (Article 100(c) EPC).

3.2 Amended features M1.7 and M3.3a (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit area of the cooling air at the front-stage cooling part) - Article 123(2) EPC

Originally filed claims 1 and 6 disclosed an invention in which management of the flow rate per unit area played a prominent role. This was confirmed by the

general disclosure of the invention (see column 2 of the A1 publication, lines 53 to 55), which also disclosed the energy efficiency resulting from this air flow management (see column 3, lines 17 to 21). Furthermore, the **general** disclosure of the invention also disclosed that the setting of the cooling air at the front-stage cooling part "*can be made particularly intended for the cooling of the bulk material*" (see column 3, lines 40 to 43).

Paragraph [0040] of the A1 publication discloses that the flow rate per unit area at the fine grain separating part is less than at the front-stage cooling part (i.e. feature M1.7/M3.3a), resulting in the advantage that the incoming cement clinker is cooled down as rapidly as possible (see column 12, lines 6 to 13). The skilled person, in the light of the **general** disclosure, will interpret this as being the setting "*particularly intended for the cooling of the bulk material*", irrespective of the particular construction of the cooling device. Consequently, the skilled person will learn from paragraphs [0040] and [0041] that feature M1.7/M3.3a has an advantageous effect in itself which adds up to that of the flow rates disclosed (*inter alia*) in originally filed claim 1. No indication can be found in the patent application which could suggest that this advantageous effect can only be achieved when using the cooling device of the particular embodiment.

Furthermore, based on the common general knowledge of the skilled person in the technical field of cement clinker cooling devices, no inextricable link can be established between the provision of a higher flow rate per unit area in the front-stage cooling part (than in the fine grain separating part) and the specific

details of the cooling device disclosed in the particular embodiment. For the skilled person, it is self-explanatory on technical grounds that the disclosed flow rates per unit area can be supplied in different ways by means of different mechanisms encompassing a plurality of alternatives concerning air flow generation and supply. The same applies to other aspects like the kind of openings through which the air flows into the cement clinker bed, the transport mechanism of the bed along the cooling device, etc.

In view of the above, the subject-matter of claims 1 and 3 does not extend beyond the originally filed application with regard to added features M1.7 and M3.3a (Article 123(2) EPC).

4. Novelty - Article 54 EPC

4.1 D12

4.1.1 Eta, Alpha and Lambda sections

The Eta section of D12 comprises a portion where the cement clinker falling from the kiln is received (see Figure 1 and second paragraph of the left-hand column in page 97). Immediately after this portion, separation of the "fines" to the bed surface takes place still in the Eta section (see paragraphs before and after Figure 5 on page 98).

The Eta section is followed by the Alpha section, where the "fines" are kept at the bed surface (see first sentence of the third paragraph below Figure 6 on page 100).

Finally, the Alpha section is followed by the Lamdba section (see point 3 starting in page 101).

4.1.2 Features M1.1 (cement clinker cooling device for cooling down a bed of a cement clinker while conveying it) and M3.1 (cement clinker cooling method of cooling down a bed of a cement clinker discharged from a kiln while conveying the bed)

It is undisputed that D12 discloses features M1.1 and M3.1 (see page 97, first paragraph of point 1).

4.1.3 Features M1.2/M3.3 (fine grain separating part) and M1.5/M1.6/M3.2 (front-stage cooling part)

The patent proprietor argued that, as the specific kind of separation of fine grains resulting in a separated bed had to take place at the claimed "fine grain separating part" (feature M1.2/M3.3), the Eta section corresponded to this claimed feature and did not comprise a receiving part as defined in feature M1.5/ M3.2).

This is not convincing given the broad wording of claim 1.

Features M1.2 and M3.3 do not define any particular separation mechanism to be used or which specific category of fine grains is to be separated. The scope of the feature encompasses any separation process irrespective of its efficiency and applies to any particle size, as long as this size is smaller than the size of other non-separated grains in the bed of the cement clinker. The word "selectively" does not have any limiting effect, since any separation process will

affect a particular range of grain sizes, thus being "selective".

The patent proprietor put forward that the Alpha section could not be regarded as a fine grain separating part since the separation already took place in the Eta section.

This is also not convincing. In the Alpha section, the "fines" are kept at the bed surface (see page 100, first sentence of third paragraph below Figure 6). This corresponds to the claimed separation of the fine grains in the bed of the cement clinker (feature M1.2/ M3.3).

In view of the above, the portion of the Eta section receiving the falling cement clinker from the kiln (see Figure 1) represents the claimed receiving part (feature M1.5). As the Eta section is provided with a vertical flow of cooling air (see e.g. page 97, right-hand column, second and third paragraphs), features M1.6 (the receiving part constitutes a front-stage cooling part configured to feed cooling air flowing upward to the cement clinker) and M3.2 (a front-stage cooling step of feeding cooling air flowing upward to the cement clinker that has been received by a receiving part) are also disclosed by the receiving portion of the Eta section.

It must be pointed out in this context that claims 1 and 3 **do not exclude** separation of fine grains taking place in the receiving part or the rear-stage cooling part. Thus, even if some separation were to take place in the portion of the Eta section receiving the material from the kiln, this would not disqualify this

region from being a receiving part within the meaning of claim 1.

As for the fine grain separating part (features M1.2/ M3.3), this can be considered to be disclosed either by the portion of the Eta section downstream from the receiving portion (see page 98, paragraph below Figure 5) or by the Alpha section (see page 100, first sentence of third paragraph below Figure 6).

4.1.4 Features M1.3 (rear-stage cooling part provided downstream from the fine grain separating part and configured to feed cooling air to the bed of the cement clinker) and M3.4 (rear-stage cooling step of feeding cooling air to the bed of the cement clinker after the fine grain separating step)

It is undisputed that the Lambda section represents a rear-stage cooling part according to features M1.3 and M3.4 (see page 102, third paragraph below Figure 12).

4.1.5 Features M1.4 (cooling air of the rear-stage cooling part having a flow rate per unit area less than the flow rate per unit area of the cooling air fed at the fine grain separating part) and M3.5 (cooling air of the rear-stage cooling step having a flow rate per unit area less than the flow rate per unit area of the cooling air fed in the fine grain separating step)

Point 3 of D12 discusses the Lambda section, and it discloses that "*As far as air load is concerned IKN has followed the tradition of reducing air density with temperature*" (see page 102, first sentence of third paragraph below Figure 12).

The equivalence of the concepts "air load" and "flow rate per unit area" has not been contested by the patent proprietor. In fact, the contested patent, see column 11, lines 49 to 52, discloses that the flow rate per unit area can be defined in Nm^3/m^2s, which is the same as Nm/s, the latter being the unit expressing the air load in D12 (see page 100, second sentence of third paragraph below Figure 6).

The Board agrees with the opponents that the skilled person reading page 102, third paragraph below Figure 12 would inevitably interpret the "tradition" cited there as consisting of reducing the **air load** when the temperature of the cement clinker bed decreases. Indeed, this paragraph explains the difficulties in increasing cooling by means of the cooling air in the Lambda section due to the fact that "*the clinker temperature in the lambda section is controlled by heat conduction within granules*". The skilled person is therefore informed that the amount of cooling air will not have as great an impact on the clinker temperature as could be assumed in principle. The final confirmation that air load is being discussed in this paragraph comes with the sentence "*However, this is not an argument that more air would be harmful*".

As the "air load" corresponds to the concept of "flow rate per unit area", and as the paragraph concerned forms part of the discussion about the Lambda section, the Board concludes that a reduction of the flow rate per unit area in the Lambda section is disclosed in D12. As the temperature of the clinker bed decreases along the cooling device, this reduction in flow rate per unit area must be understood as a reduction **with respect to the preceding sections** of the cooling

device, where the temperature of the clinker bed is higher.

The patent proprietor's arguments concerning the presence of a single drive, the lack of air flow regulation means or the provision of a single flow rate value for the whole cooling device are not convincing.

The disclosure of a "single drive" in D12, second paragraph below Figure 12 concerns the **drive for the longitudinal transport** of the cement clinker bed. The skilled person will understand this in view of the reference to "retention time" in this paragraph, which concerns the time spent by the cement clinker in the cooling device. Therefore, the disclosure of such a single drive does not have any implications with respect to the air flow rate per unit area.

Concerning the flow regulation means, even if page 100, left-hand column, fifth sentence of third paragraph were interpreted as disclosing a lack of flow regulation means **for the flow rate along the cooling device**, which is doubtful since the disclosure concerns the left and right compartments, this would not necessarily imply that the flow rate per unit area would be constant along all sections. The flow rate per unit area can be set by default at a different constant value for each section without requiring any flow regulation means. Thus, the question of whether D6 actually refers to the cooling device of D12 and to what extent it might disclose a lack of means for controlling aeration in the latter is in fact irrelevant.

Finally, it must be acknowledged that point 4.3 of D12 discloses a "*cooling airflow of 1.85 m^3/kg*" for the

"pendulum cooler" (see title of point 4) as a whole. However, this does not disclose any details about how this total cooling airflow was **distributed among the sections** of the device, i.e. whether or not the cooling airflow was constant along them.

Thus, features M1.4 and M3.5 are disclosed in D12.

4.1.6 Feature M1.7/M3.3a (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit area of the cooling air at the front-stage cooling part)

The opponents argued that the teaching about the "traditional" reduction of air load applied to all sections of the cooling device disclosed in D12, and not only to the Lamdba section (see page 102, left-hand column, third paragraph).

However, this conclusion cannot be drawn from D12.

The disclosure about the "tradition" of reducing air load with temperature is to be found in point 3, which deals specifically with the Lambda section. Therefore, the skilled person would understand that this is teaching in the context of the Lambda section and would have no reason to interpret it as also applying to the Eta and Alpha sections.

The argument of opponent 1 about a thicker depth of the bed at the receiving portion of the Eta section which would require a higher air pressure is not convincing.

The disclosure of a bed pressure close to the weight of the bed (page 98, paragraph below Figure 5) is to be interpreted in the context of the separation of the

fines, which is the subject of the paragraph where this is stated. Since fines separation takes place downstream from the receiving portion of the Eta section, **no clear and unambiguous conclusion** can be drawn about what would be the bed thickness in the subsequent portion of the Eta section where the fines are separated, let alone about whether such a bed would be deeper than the one in the Alpha section.

Opponent 2 argued that the reference to a "fan reserve" to be used at the Eta section (page 97, right-hand column, middle of last paragraph) disclosed that the flow rate per unit area at the location where the cement clinker landed was higher than in the subsequent portions of the bed.

However, this "fan reserve" remains undefined in D12, and there is no **clear and unambiguous** disclosure that it would result in a flow rate per unit area higher than in the Alpha section.

It is also inconclusive in this respect in view of the aeration in the Alpha section being disclosed as "gentle" (page 100, first sentence of the paragraph above Figure 7), since this does not in itself imply any comparison with the preceding Eta section. In fact, the same sentence specifies that this "gentle aeration" keeps the fluidisable fines at the bed surface and lifts them up about 5 cm. This means that the flow rate per unit area must be high enough to ensure this effect, which was also achieved in the Eta section. The correspondence in terms of separation of the fines speaks against a **clear and unambiguous disclosure** of a lower flow rate per unit area being fed at the Alpha section, as does the reference to a bed being "*aerated* ***equally*** *by the following grate*" (i.e. the Alpha

section) (emphasis added) at the end of point 1 (see penultimate sentence before point 2).

In view of the above, feature M1.7/M3.3a is not disclosed by D12.

4.2 D11

Claims 1 and 3 require **three** parts/steps (front-stage cooling part/step, fine grain separating part/step and rear-stage cooling part/step) where different flow rates per unit area are fed at each part/step (features M1.4, M1.7, M3.3a, M3.5).

Document D11 discloses only **two** separate chambers (6, 7) where a respective flow rate per unit area could be fed to each chamber.

Thus, at least features M1.3 (rear-stage cooling part provided downstream from the fine grain separating part and configured to feed cooling air to the bed) and M3.4 (a rear-stage cooling step of feeding cooling air to the bed of the cement clinker after the fine grain separating step) are not disclosed in D11.

4.3 D2

Opponent 2 argued that the different number of fans allocated to each region in Figure 2 - which was the embodiment used to support their objection - disclosed a lower flow rate in region 20b.

This argument is not convincing. Figure 2 is merely schematic and no conclusions can be drawn about the characteristics of each fan with regard to the flow rate of cooling air that they provide. Furthermore,

both regions 20a and 20b are respectively provided with **two fans** supplying an "oxidising coolant" (11) (i.e. air; see page 14, line 8). The other two pumping elements disclosed in Figure 2 which are connected to the region 20a are intended to supply a "non-oxidising coolant" (19) by suitable means (3) (see page 15, lines 15 to 19, page 16, lines 4 to 8 and paragraph bridging pages 16 and 17) and thus play no role in the flow rate per unit area **of the cooling air** fed at region 20a.

Thus, at least features M1.4 and M3.5 are not disclosed in D2.

4.4 In view of the above the subject-matter of claims 1 and 3 of the main request is novel.

5. Inventive step - Article 56 EPC

5.1 Closest prior art

Both opponents presented their objections starting from D12. This was not contested by the patent proprietor.

5.2 Distinguishing features

As explained above, the subject-matter of claims 1 and 3 differs from D12 in feature M1.7/M3.3a (see point 4.1 above).

The technical effect of this distinguishing feature is that the cement clinker fed from the kiln is cooled down faster, as disclosed in the patent specification (see column 12, lines 7 to 14) and as is self-explanatory from a thermodynamic standpoint.

The objective technical problem can thus be defined as increasing the energy efficiency of the cooling device/ method, as argued by opponent 2 and the patent proprietor.

Opponent 1 proposed a technical problem which actually corresponded to this objective technical problem, and argued that the technical problem was the reduction of costs. Apart from the fact that the definition of this technical effect was not restricted to the direct impact of the distinguishing features in purely objective terms, this divergence does not imply a difference in the subsequent analysis, since energy efficiency is directly related to a cost reduction.

5.3 Alleged hints in D12

Both opponents argued that D12 itself contained a hint which would have prompted the skilled person to address the objective technical problem, since page 102, left-hand column, third paragraph disclosed that air load could be reduced with temperature for the purpose of increasing energy efficiency and reducing operational costs. The skilled person would take note of this hint and would conclude that the flow rate per unit area had to be reduced from one section to another in D12 to solve the technical problem posed.

However, as explained above, the disclosure in the cited paragraph is to be read in the context of the Lambda section, as it is included in the discussion of the latter (see point 4.1.6 above). Thus, the skilled person would not learn from it that the "tradition" of reducing air load with temperature could also be applied to the preceding Eta and Alpha sections, in particular in view of the separation of fines which is

disclosed as an essential feature of these. Indeed, the general technical knowledge of the skilled person would make them realise that a reduction in flow rate per unit area in the Alpha section, i.e. to make it lower than that of the Eta section, could possibly negatively affect fines separation. Thus, in the absence of a clear hint which would prompt them to overcome this technical prejudice, the skilled person would not take this possibility into consideration.

The third paragraph in the right-hand column of page 98 of D12 does not provide such a clear hint. This paragraph does indeed disclose that the result of the Eta section is "*a bed of uniformly less resistance*", but the same sentence continues as follows: "*which will be aerated* ***equally*** *by the following grate* [i.e. the Alpha section]" (emphasis added). Consequently, the skilled person is instead prompted to keep the flow rate per unit area constant in the Alpha section, something which is consistent with the function of this section (keeping the fines separated at the bed surface; see page 100, third paragraph below Figure 6).

Furthermore, the skilled person learns from D12 that increasing the flow rate per unit area in the Eta section results in problems of wear (see page 97, right-hand column, third and fourth sentences of second paragraph, "strong aeration ... had exposed the landing area", and also the first two sentences of the paragraph above Figure 2 in the same page). Thus, the general teaching in D12 is against increasing the flow rate per unit area in the Eta section, and the skilled person would need a strong incentive for them to consider this option. Again, such teaching cannot be found in D12.

For the sake of completeness, it must be pointed out that, since the Eta section is disclosed as a single step supplied with an upwards flow of air, providing different flow rates per unit area in the portion of the Eta section receiving the material from the kiln and in the subsequent portion of the Eta section would require major modifications which go well beyond the routine practice of the skilled person.

5.4 D19 as representation of common general knowledge

The Board is not convinced that D19 can be considered as evidence of common general knowledge concerning cement clinker cooling devices **in which separation of fines takes place**.

Page 11 of D19 discloses values of flow rate per unit area for grate coolers which coincide with the parameters disclosed in D12, page 100, third paragraph of the left-hand column (1 Nm/s). The same page discloses that "*The value is an average over the entire grate and is usually decreasing from the clinker inlet towards the outlet*".

However, nothing in D19 indicates that this last remark applies to cement clinker coolers which are based on the separation of fines. D19 concerns an undefined category of "grate coolers" for which this "usual" practice may well apply, but it does not allow the conclusion to be drawn that this is common general knowledge for the particular cooling device of D12. The coincidence in the magnitudes of the flow rate per unit area disclosed in D12 and D19 does not imply that the cooling devices referred to in both documents are the same.

Thus, no common general knowledge can be acknowledged - even considering D19 - which would motivate the skilled person to provide a higher flow rate per unit area in the Eta section than in the Alpha section of D12.

5.5 Combination with D5

Document D5 cannot provide the skilled person with the teaching needed to arrive at the claimed invention.

Although this document does address the problem of improving heat transfer, the solution provided therein is based on a separation of the fines in a first section 21 (see column 4, lines 27 to 34) **which is not maintained** in the next section 22 (see column 4, lines 51 to 62).

Therefore, the skilled person would not take the teaching of D5 into consideration since it goes against the basic working principle of D12, where the separation of fines is maintained in both the Eta and Alpha sections.

5.6 In view of the above, the subject-matter of claims 1 and 3 involves an inventive step with regard to D12 taken alone or in combination with D5 or with the common general knowledge represented by D19 (Article 56 EPC).

6. Admittance of objections of lack of disclosure - G 10/91 and Article 12(4) RPBA 2007

6.1 Objection against granted features - Article 100(b) EPC

No ground for opposition based on Article 100(b) EPC was raised during the opposition proceedings.

Opponent 2 raised an objection against the granted claims based on this legal provision for the first time in its reply of 27 May 2020 to the patent proprietor's statement setting out the grounds of appeal. This is therefore a fresh ground for opposition.

According to the opinion G 10/91, OJ EPO 1993, 420, of the Enlarged Board of Appeal "*fresh grounds for opposition may be considered in appeal proceedings only with the approval of the patentee*" (headnote, point 3).

The patent proprietor did not provide such approval.

Thus, the Board is obliged not to consider this ground for opposition in relation to the granted features.

6.2 Objection against modified features - Article 83 EPC

No objection based on sufficiency of disclosure (Article 83 EPC) was raised in the opposition proceedings against the first auxiliary request which was dealt with in the contested decision, and which corresponds to the current main request. However, opponent 2 did raise such an objection with their statement setting out the grounds of appeal, and also with their reply to the patent proprietor's appeal.

Opponent 2 objected that, if the patent proprietor's arguments regarding the interpretation of features were held valid (only the fine grain separating part is configured to separate the fine grains), the limitations of feature M1.2 (fine grain separating part configured to feed cooling air flowing upward to the bed of the cement clinker, and by the cooling air, selectively separate fine grains in the bed of the

cement clinker to an upper side of the bed) and added feature M1.7 (flow rate per unit area of the cooling air at the fine grain separating part being less than the flow rate per unit area of the cooling air at the front-stage cooling part) could not be simultaneously complied with.

Opponent 2 argued that the patent proprietor's interpretation of the features resulting in the newly raised objection of lack of disclosure had been made known for the first time in the oral proceedings before the Opposition Division and that this justified the admittance of the objection filed for the first time in the appeal proceedings.

The Board is not convinced by this reasoning.

First of all, the patent proprietor's interpretation of the features allegedly resulting in a lack of disclosure has been found not to be valid (see penultimate paragraph of point 4.1.3 above). The conditional objection thus seems to be *prima facie* irrelevant and would not, therefore, be decisive for the outcome of the proceedings.

Secondly, the circumstances are not such as to justify the discussion of an objection which could and should have been filed during the opposition proceedings, at the latest in the course of the oral proceedings. No supplementary search or complex theoretical consideration was necessary which might have prevented opponent 2 from raising this objection when the claim was filed or at the latest when the interpretation of the claim in view of the added features was proposed.

Consequently, the Board, in exercising its discretion under Article 12(4) RPBA 2007, has not taken this objection into consideration.

7. Admittance of the amended description - Article 13(2) RPBA 2020

The patent proprietor filed an amended description at the oral proceedings before the Board.

Opponent 2 requested that the amended description not be admitted into the proceedings since it was late filed and formed an amendment of the appeal case such that Article 13(2) RPBA 2020 was applicable. It should have been filed earlier.

However, the amendments in paragraphs [0008] and [0014] of the description **cannot be regarded as an amendment to the patent proprietor's appeal case**, since they merely introduce the invention as claimed into the description of the patent ("a cooling device according to claim 1" or "a cooling method according to claim 3"). In this respect, the amendments do not introduce any matter that would change the interpretation of the features of the claims to be taken into consideration under Article 69 EPC, contrary to the view of opponent 2, who, however, did not give an example of a changed interpretation. Thus, the amended description relates in all respects to the claims of the main request, which was itself admitted into the proceedings.

Therefore, Article 13(2) RPBA 2020 does not apply to the amended description.

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 as amended in the following version:

   - Claims 1 to 3 according to the main request, filed as auxiliary request 1 new with the letter dated 31 August 2022,

   - Description: pages 2 and 3 filed at the oral proceedings before the Board on 23 January 2023 and pages 4 to 10 of the patent specification,

   - Figures 1 to 5 of the patent specification.

The Registrar: The Chairman:

C. Spira G. Patton

Decision electronically authenticated