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**Datasheet for the decision
of 10 October 2024**

Case Number: T 1336/21 - 3.2.03

Application Number: 10782307.2

Publication Number: 2510281

IPC: F23D14/10

Language of the proceedings: EN

Title of invention:

BURNER WITH LOW POROSITY BURNER DECK

Patent Proprietors:

Bekaert Combustion Technology B.V.
NV Bekaert SA

Opponents:

Polidoro S.p.A.
Worgas Bruciatori S.r.l.
Viessmann Group GmbH & Co. KG

Headword:

Relevant legal provisions:

EPC Art. 83, 54(2), 123(2), 111(1)
EPC R. 103(1)(a)
RPBA 2020 Art. 12(6), 13(2)

Keyword:

Sufficiency of disclosure - relationship between Article 83 and Article 84 - main request (yes)
Novelty - common general knowledge - availability to the public - main request (yes) - public prior use - standard of proof - public prior use - burden of proof
Appeal decision - remittal to the department of first instance (yes)
Substantial procedural violation - reimbursement of appeal fee (no) - violation of the right to be heard (no)
Late-filed objection - should have been submitted in first-instance proceedings (yes) - circumstances of appeal case justify admittance (no) - no longer maintained in first-instance proceedings (yes) - admitted (no)

Decisions cited:

G 0003/14, T 0939/92, T 1138/20

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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

Case Number: T 1336/21 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 10 October 2024

Appellant: Bekaert Combustion Technology B.V.
(Patent Proprietor 1) J.C. van Markenstraat 19
9403 AR Assen (NL)

Appellant: NV Bekaert SA
(Patent Proprietor 2) Bekaertstraat 2
8550 Zwevegem (BE)

Representative: EP&C
P.O. Box 3241
2280 GE Rijswijk (NL)

Respondent: Polidoro S.p.A.
(Opponent 1) Via Lago di Misurina, 76
36015 Schio VI (IT)

Representative: Cossu, Alessandro
Bugnion S.p.A.
Via di Corticella, 87
40128 Bologna (IT)

Respondent: Worgas Bruciatori S.r.l.
(Opponent 2) Via della Formace, 7
41043 Formigine, Modena (IT)

Representative: Leihkauf, Steffen Falk
Jacobacci & Partners S.p.A.
Via Senato 8
20121 Milano (IT)

Respondent: Viessmann Group GmbH & Co. KG
(Opponent 3) Viessmannstraße 1
35108 Allendorf/Eder (DE)

Representative: Wolf, Michael
Patent- und Rechtsanwälte
Wolf & Wolf
Hirschstrasse 7
63450 Hanau (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 11 June 2021
revoking European patent No. 2510281 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman C. Herberhold
Members: R. Baltanás y Jorge
F. Bostedt
B. Goers
M. Millet

Summary of Facts and Submissions

- I. European patent No. 2 510 281 B1 relates to a "*burner with low porosity burner deck*".
- II. Three oppositions were filed against the patent, which were based on Articles 100(c) EPC, 100(b) EPC and 100(a) EPC in conjunction with Articles 54 EPC and 56 EPC.
- III. The present appeal is against the decision of the opposition division to revoke the European patent.
- IV. This decision was appealed by the patent proprietors.
- V. In a communication pursuant to Article 15(1) RPBA, the Board indicated its preliminary opinion.

Oral proceedings were held on 10 October 2024.

VI. Requests

The appellants requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request dealt with in the contested decision and resubmitted with the statement setting out the grounds of appeal or, alternatively, on the basis of one of auxiliary requests 1 to 11 filed with the statement setting out the grounds of appeal.

The appellants further requested

- that the case be remitted to the opposition division if "*it turns out that there still are essential questions regarding the patentability of*

the claimed subject-matter which have not yet been examined and decided on by the opposition division"

- that the appeal fee be reimbursed on the grounds of an alleged substantial procedural violation

Opponents 1, 2 and 3 (respondents 1, 2 and 3) requested that the appeal be dismissed.

In addition, respondents 1 and 2 requested that Annexes 1 to 10 filed by the appellants with the statement setting out the grounds of appeal not be admitted.

Respondent 2 requested that auxiliary request 2 not be admitted, and respondent 1 extended this request to also include each of auxiliary requests 3 to 11.

Respondent 1 also requested that the appellants' requests for reimbursement of the appeal fee and the remittal of the case to the opposition division be rejected.

VII. Claim 1 of the main request, including the numbering of its features based on that adopted in the contested decision, reads as follows:

- 1** *A gas burner (10),*
- 1a** *preferably a premix burner,*
- 2** *comprising a support (12) having a central gas inlet port (14) for supply of gas into a gas supply chamber (16),*
- 3** *said gas supply chamber being enclosed by a cylindrical perforated metal plate (22),*

- 4 *said cylindrical perforated metal plate (22) connected at the bottom to said support (12) through a base section,*
- 5 *said perforation (24) in said cylindrical perforated metal plate (22) providing a burner deck (20),*
- 6 *characterised in that said burner deck (20) has an overall porosity being equal to or lower than 11%;*
- 7 *wherein more than 50% of the burner deck has a porosity being equal to or lower than 9%*
- 8 *and wherein up to 50% of the burner deck has a porosity being higher than 11%.*

Claim 3 of the main request reads as follows:

A gas burner as in claim 2, wherein said end cap (18) is also provided with perforations (30), said perforations (30) thereby enlarging said burner deck (20).

Claims 1 and 3 of the main request are identical to granted claims 1 and 3.

VIII. Prior art

The following documents submitted during the opposition proceedings are relevant to this decision:

- E2 (E17): EP 2 037 175 A2
(E2 was re-filed as E17 with the letter dated 30 September 2024 and will be referred to as "E17" in the following)
- P1: Technical drawing 109.0020.00, in Italian
- P1T: Translation into English of P1

- P1*: Technical drawing 109.0020.00, edited version for publication in the electronic file
- P1a: Technical drawing 148.3538.00, in Italian
- P1aT: Translation into English of P1a
- P1a*: Technical drawing 148.3538.00, edited version for publication in the electronic file
- P2d: Invoice 201, Polidoro USA Inc., 20 April 2009
- P3c: Invoice 214, Polidoro USA Inc., 21 May 2009
- P4: Invoice 1434, Polidoro Combustion Technology, 31 July 2009
- P4b: Email from Irene Pietribiasi, 30 June 2009
- P4c: Invoice 240, Polidoro USA Inc., 31 July 2009

Respondent 1 filed the following document, which is relevant for this decision, for the first time with its reply to the statement setting out the grounds of appeal:

E16: Experimental results of tests

IX. The appellants' arguments concerning the main request can be summarised as follows:

(a) Sufficiency of disclosure

The technical effect allegedly not achievable by the features of claim 1 was not part of the claimed subject-matter. Consequently, the alleged failure to achieve this technical effect across the whole breadth of the scope of protection did not constitute a reason

to consider the subject-matter of claim 1 insufficiently disclosed.

The objection based on a contradiction in the ranges defined in claim 1 related to a possible lack of clarity, but not to an insufficient disclosure of the invention.

Finally, the skilled person willing to understand the invention had no difficulty in understanding that the end cap defined in claim 3 did extend what had to be understood as the "burner deck" within the meaning of the invention.

(b) Added subject-matter

The only objection raised against the main request on the grounds of added subject-matter during the first-instance proceedings concerned what is the present claim 7 (i.e. the granted claim 8), and this claim was withdrawn during the oral proceedings before the opposition division.

The fresh or non-maintained objections of an alleged extension of subject-matter, which were filed with the reply of respondent 2 to the statement setting out the grounds of appeal, were therefore not to be admitted under Article 12(4) and (6) RPBA.

(c) Public availability of the prior-use Polidoro burner

The opposition division did not apply the correct standard of proof since all the evidence relating to the alleged public prior use of the Polidoro burner lay within the sphere of respondent 1. The applicable

standard of proof in such circumstances was the one defined as "beyond reasonable doubt" or "up to the hilt". The evidence provided by respondent 1 could not satisfy this standard. The emails in P4b mentioned a burner identified as "310-burner", with respect to which no details had been provided. This aspect - together with the fact that the first two orders linked to P2d and P3c related to "prototypes" - cast doubt on whether the 1 000 burners corresponded to the design shown in P1* and P1a* since changes might have been made to a product which seemed to be in development.

Furthermore, there was a lack of consistency among documents P1, P1T and P1*, which cast doubt on the reliability of the disclosure in P1. P1* comprised text oriented vertically with an arrow pointing to it. The vertical text in the gas burner read "POLIDORO ITALIA XXXXX 109 00" (emphasis added). The vertical legend in the text where the arrow started included an explanation about the meaning of the ciphers, and also the sequence of numbers "109 0020 00", with the wording "Polidoro code" appearing close by. However, P1T did not comprise the vertical text or the arrow to the left of the burner, and the vertical reference number read "101 00" (emphasis added). Finally, P1 did not show the vertical numbers within the gas burner or the related texts appearing in P1T and P1*.

Moreover, some of the characters shown in P1 and P1a were too large when the original size of the drawing was taken into account, and some of the information displayed in these drawings - which was decisive for the objections raised - was technically irrelevant since there was no good reason for having included it in these technical drawings. It was also noted that

some of the holes shown in P1 and P1a had a cross whereas others comprised only a vertical line, a fact which had no reasonable explanation since all of the holes were allegedly identical and would have been reproduced by "cut and paste" when drafting such a drawing.

Taking into account all the amendments in P1T and P1* - as acknowledged by respondent 1 - as well as the inconsistencies relating to several aspects of P1 and P1a, it could not be concluded that it had been proved "beyond reasonable doubt" which product was sold in the sale linked to documents P4 and P4c, in particular on the basis of P1* and P1a*, which were the documents to be taken into account for the decision since they were the only publicly available evidence (P1, P1T and P1a had been excluded from public file inspection as requested by respondent 1).

(d) Novelty over the prior-use Polidoro burner

Feature 5 of claim 1 specified that the perforations in the cylindrical perforated metal plate **provided** a burner deck. This implied that the cylindrical perforated metal plate had to form the external surface of the gas burner, i.e. the surface holding the flames, in line with paragraphs [0001] and [0016] and column 4, lines 50 to 52, of the patent specification. Indeed, the patent specification disclosed only the type of burner deck provided by a cylindrical perforated metal plate forming the external surface of the gas burner holding the flames (see paragraph [0001]). Figures 2c, 4, 5, 6, 7, 8 and 9 of the patent specification did not disclose any further element arranged over the cylindrical perforated metal plate (22), as was also derivable from the content of the description. It was

systematically disclosed therein that the perforation pattern was repeated in the perforated metal plate - having the reference number (22) in the figures - over the circumference of the burner (see, for example, paragraphs [0026], [0027] and [0029] of the patent specification). The representation in broken lines in Figure 8 was different from the one used in Figures 2c, 4, 5, 6 and 7, which confirmed that the broken lines were just a choice made by the artist for representing the perforated metal plate in a simplified manner.

The gas burner disclosed in P1 and P1a comprised a metal fibre mesh arranged over a cylindrical perforated metal plate. The skilled person looking at this gas burner understood that the burner deck was formed by the metal fibre mesh since this was the external part of the gas burner or, at most, by the ensemble formed by this element and the cylindrical perforated plate arranged below.

The new arguments filed by respondent 1 by letter dated 30 September 2024 - relating, among other things, to the physics of a flame - should not be admitted on the grounds of being late filed. In any case, document E17 - on the basis of which new allegations of fact had been submitted with the same letter - confirmed the appellants' interpretation since the passage in column 3, lines 5 to 7, stated that a gas burner with a fabric mesh has a different type of burner deck than the one provided by a perforated metal plate.

(e) Remittal

The case should be remitted to the opposition division for further prosecution in view of the multiple objections and pieces of evidence which were not dealt

with during the opposition proceedings. The alleged obviousness of the subject-matter of claim 1 due to a missing technical effect across the whole breadth of the scope of protection was only one of these objections. There was thus no reason to deal with this particular objection in the appeal proceedings.

(f) Reimbursement of the appeal fee

The opposition division committed a substantial procedural violation in refusing to even briefly explain its reasoning behind the decision not to allow auxiliary request 3. This deprived the appellants of the opportunity to file a further auxiliary request to overcome the relevant objections raised, since several arguments against auxiliary request 3 had been presented by the opponents and the appellants had not been told which one(s) had been considered relevant by the opposition division. Since the opposition division's refusal to explain its reasoning had a significant impact on the outcome of the first-instance proceedings, the appeal fee should be reimbursed.

X. The respondents' arguments concerning the main request can be summarised as follows:

(a) Sufficiency of disclosure

The patent specification did not disclose the invention in a manner sufficiently clear and complete for the skilled person to be able to reproduce the invention defined in claim 1, since the porosity patterns defined in the claim did not achieve the technical effects alleged in paragraph [0024] of the patent. Document E16 - which disclosed the results of experimental tests carried out by respondent 1 and was part of the

submissions in the first-instance proceedings - proved this.

Furthermore, the definition in feature 7 ("*more than 50% of the burner deck has a porosity being equal to or lower than 9%*") was impossible to fulfil when the upper end point of the range defined in feature 8 ("*up to 50% of the burner deck has a porosity being higher than 11%*") was taken into consideration since this automatically resulted in a maximum value of 50% of the burner deck available for the porosity defined in feature 7.

Finally, the perforations of the end cap defined in claim 3 could not enlarge the burner deck as defined in this claim, since according to feature 5 of claim 1 the burner deck was provided by a cylindrical perforated metal plate and therefore not by the end cap.

(b) Added subject-matter

The objections against claims 1, 3 and 7 on the grounds of added subject-matter were to be admitted since they were easy to verify and were *prima facie* relevant. These objections applied to all of the auxiliary requests as well. Furthermore, this issue was relevant for future invalidation proceedings and therefore it was appropriate to consider it in the appeal proceedings. Moreover, objections on the grounds of added subject-matter had already been discussed in the first-instance proceedings within the context of some of the auxiliary requests, and therefore the issue was not new to the proceedings.

(c) Public availability of the prior-use Polidoro burner

Documents P1 and P1a were the originally filed evidence which had been filed in a timely manner and sent to the other parties in the proceedings. These pieces of evidence were to be taken into account for the decision, irrespective of the fact that a translation into English (P1T) had been provided for the convenience of all other parties and the EPO, and that a redacted version (P1*) of this translation had also been provided to render the evidence public as far as possible.

P1T and P1* contained new information with respect to P1 since the staff modifying the latter to provide the translation and the edited version thereof applied some standard procedures which were in force at that time at Polidoro, such as including the reference number of the burner in the representation of the piece itself. However, the relevant information linking P1 and P1a to the sale proven by P4 and P4c was not affected by these modifications.

Furthermore, P1T did not show the ciphers "101 00" (emphasis added) as alleged by the appellants but instead showed "109 00", even if the number "9" was shown in an incomplete manner due to the electronic processing of the image.

The alleged inconsistencies in P1 and P1a in terms of character size, the information displayed and the different auxiliary lines present in particular holes were mere speculations by the appellants and were therefore irrelevant in terms of evidence value. All the concerned characters, information and auxiliary

lines - which served the purpose of indicating the alignment of the holes - were present in the original evidence and there was no reason to question their purpose.

Finally, all these arguments and allegations of fact could have been put forward during the first-instance proceedings or with the statement setting out the grounds of appeal. Consequently, they constituted an amendment of the appeal case which should not be admitted under Article 13(2) RPBA.

(d) Novelty over the prior-use Polidoro burner

Claim 1 defined a product to be protected in every condition, including when not in use. Therefore, claim 1 could not be interpreted in terms of how the product behaves when being used, and the condition of the defined burner deck holding a flame could not be regarded as limiting.

The alleged distinguishing features of claim 1 based on an external position of the burner deck or the function of the latter as a "flame holder" were not defined in claim 1. In fact, they were not even disclosed in the patent specification in connection with a generic "gas burner", which was the claimed device. Paragraph [0001] only disclosed the flame-holder function in connection with a premix burner, which was just an alternative defined in feature 1a. Paragraph [0016] only referred to the "surface" of the burner deck within the meaning of a region of certain dimensions and not to an **"external surface"**, as could be derived from paragraph [0017].

The gas burner disclosed in P1 and P1a comprised a burner deck provided by a perforated cylindrical metal plate as defined in feature 5, regardless of whether or not this burner deck held a flame. In any case, it was disclosed in Annex 10, left-hand column, of point 1., "Introduction", second paragraph, that such a burner deck held a flame. Thus, the burner deck disclosed in P1 and P1a was suitable for this function and complied with the definition provided in the first sentence of paragraph [0016] of the patent specification ("*that part of the burner where the totality of perforations are present*"), which qualified a first definition provided in paragraph [0002], lines 16 to 20, and also with that of feature 5 of claim 1 ("*said perforation in said cylindrical perforated metal plate providing a burner deck*").

It had to be taken into account that the general meaning of "deck" was that of a structural element of support. This was exactly the role of the perforated cylindrical metal plate (1) of P1 and P1a. The metal fibre mesh (4) of the Polidoro gas burner could not form a structural support and would thus not be considered a burner deck by the skilled person. This metal fibre mesh was typically tightly wrapped around the burner deck to provide a better combustion, thus improving the properties of the burner deck, but the burner could also be used without the fibre mesh, which was not essential for it to work.

Another reason for the mesh not being part of the burner deck was that according to the definition in feature 5, only the perforations of the metal plate provided the burner deck. The openings of the mesh did not fulfil that condition since they were not

perforations of the metal plate, and therefore the mesh could not be considered part of the burner deck.

Document E17, which was cited in paragraph [0002] of the patent specification as prior art relating to burner decks, disclosed that the burner deck was formed by a perforated cylindrical metal plate and that it could be covered by a fibre mesh as in the gas burner of P1 and P1a (see E17, column 3, lines 4 to 7). This is in line with the disclosure of the patent specification since Figures 2c and 4 to 9 disclosed that a further element can be arranged over the cylindrical perforated metal plate.

(e) Remittal

The Board should not remit the case to the opposition division before having at least decided on the objection relating to a lack of inventive step based on the criteria set out in T 939/92, a legal argument which had already been raised in the reply to the statement setting out the grounds of appeal and which could easily be discussed in the appeal proceedings. According to this decision, a claim that did not achieve a technical effect over the whole breadth of its scope of protection could not be inventive. Deciding on this purely legal argument did not go beyond the power of the Board.

(f) Reimbursement of the appeal fee

No procedural violation justifying the reimbursement of the appeal fee was committed by the opposition division.

Reasons for the Decision

1. Main request, sufficiency of disclosure, Article 83 EPC

1.1 Technical effect allegedly impossible to achieve

1.1.1 Respondent 1 argued that the patent specification did not disclose how to achieve the technical effects alleged in paragraph [0024] of the patent specification by applying the porosity patterns defined in claim 1. Document E16 proved - by disclosing the results of experimental tests carried out by respondent 1 - that the provision of the porosity ranges defined in claim 1 did not necessarily lead to achieving these technical effects.

1.1.2 This is not persuasive since - as explained by the opposition division in the contested decision - no technical effect is defined in claim 1. Respondent 1 did not contest that the skilled person can build a device according to the definition given in claim 1 on the basis of their common general knowledge and the information provided in the patent specification, and this is the only critical point concerning sufficiency of disclosure of the invention defined in claim 1. Whether or not the device built according to the definitions of claim 1 achieves the technical effects disclosed in the patent specification may play a role when considering inventive step (in particular in the context of formulating the objective technical problem; see point 5.3 below in connection with this objection) but not in the discussion about sufficiency of disclosure.

In view of the foregoing, it is not necessary to analyse whether E16 actually corresponds to "*material*

which was admissibly presented during the first-instance proceedings" as argued by respondent 1 or whether its admittance must be assessed under the provisions of Article 12(4) and (6) RPBA.

1.2 Porosity ranges and end cap enlarging the burner deck

1.2.1 Respondent 2 argued that the definition in feature 7 ("*more than 50% of the burner deck has a porosity being equal to or lower than 9%*") was impossible to fulfil when the upper end point of the range defined in feature 8 ("*up to 50% of the burner deck has a porosity being higher than 11%*") was taken into consideration, since this automatically resulted in a maximum value of 50% of the burner deck available for the porosity defined in feature 7.

1.2.2 Respondent 2 also put forward that the perforations of the end cap defined in claim 3 could not enlarge the burner deck as defined in this claim, since according to feature 5 of claim 1 the burner deck was provided by a cylindrical perforated metal plate.

1.2.3 It is noted that these objections were raised for the first time in the appeal proceedings, and therefore the admittance thereof is subject to the provisions of Articles 12(4) and (6), second sentence, RPBA.

However, since the objections actually relate to the requirement of clarity rather than to that of sufficiency of disclosure, it is more expedient to deal with them in substance.

1.2.4 As to the first of respondent 2's objections, the upper end point of the range defined in feature 8 results in a contradiction within claim 1 in a single point of the

range (exactly 50% for porosity > 11%), but this is an issue relating to the clarity of the claim and not to a lack of sufficiency of disclosure. The skilled person would identify this contradiction and would have to consider what ranges are actually encompassed by claim 1 in view of this contradiction. This is a typical problem of a lack of clarity due to the uncertainty created about the actual scope of protection and should not be confused with the difficulty of reproducing the invention. As claim 1 of the main request corresponds to claim 1 as granted, the requirements of Article 84 EPC cannot be examined in this respect in opposition appeal proceedings (see G 3/14, headnote).

- 1.2.5 Concerning the second objection, feature 5 of claim 1 reads "**said perforation** in said cylindrical perforated metal plate providing a burner deck" (emphasis added). Consequently, the burner deck is provided by the region(s)/area(s) provided with perforations in the cylindrical perforated metal plate. Claim 3 defines **perforations** in the end cap and specifies that these perforations enlarge the (total area of) the burner deck defined in claim 1. It is clear to the skilled person willing to understand the invention as defined in claim 1 that the perforations in the end cap enlarge the total area provided with perforations. Figure 3 and Figure 11 disclose embodiments in which the perforated areas of the end cap and cylindrical perforated metal plate together provide an enlarged burner deck, and this additional perforated area has to be considered when determining the overall burner deck porosity. The issue of whether or not the burner deck would have been interpreted in view of feature 5 as an element which can only be defined by the cylindrical perforated metal plate, to the extent of casting doubt on the meaning of

claim 3, might at most reveal a problem of lack of clarity - which would not be open to examination since it relates to granted claims - but not of sufficiency of disclosure.

1.3 Conclusion

The main request complies with the requirements of sufficiency of disclosure (Article 83 EPC).

2. Main request, added subject-matter, Article 123(2) EPC - admittance, Article 12(6) RPBA

2.1 The only objection relating to added subject-matter was raised by opponent 1 against granted claim 8 (corresponding to claim 7 of the main request). The objection was based on the alleged lack of a literal basis in the originally filed application for the features of granted claim 8 (*"said gas burner is devoid of a gas diffuser between the gas inlet port and the perforated metal plate"*).

However, this objection was withdrawn during the oral proceedings before the opposition division (see the minutes, point 4.1).

2.2 Respondent 2 raised three objections on the grounds of added subject-matter in its reply to the statement setting out the grounds of appeal. It addressed claims 1, 3 and 7 of the main request, respectively (see point 3.1, penultimate paragraph, from which it can be derived that it is indeed claim 7 of the main request that is objected to, corresponding to claim 8 as granted).

The objection against claim 1 was based on the allegedly missing original disclosure of the feature "**cylindrical** perforated metal plate" (emphasis added).

The objection against claim 3 addressed the interaction between the end cap provided with perforations as defined in claim 3 and the cylindrical perforated metal plate as defined in claim 1, and its resulting impact on the porosity defined by this claim combination.

The objection against claim 7 basically corresponded to the one originally raised (and not maintained) against granted claim 8 in the opposition proceedings.

- 2.3 It has not been contested that the objection against claim 7 corresponds to the one which was explicitly withdrawn during the oral proceedings before the opposition division.

Similarly, it has not been contested that the objections against claims 1 and 3 were not raised during the opposition proceedings. Respondent 2 did not explain why they were not raised in those proceedings.

The admittance of objections which were not raised during the opposition proceedings but should have been (i.e. the objections against claims 1 and 3), or which were not maintained during the opposition proceedings (i.e. the objections against claim 7), such that the decision is not based on them (Article 12(2) RPBA) is subject to Article 12(4) and (6), second sentence, RPBA.

- 2.4 Respondent 2 argued that the objections were to be admitted since they were easy to verify and were *prima facie* relevant, in particular since they are applicable

to all of the auxiliary requests as well. Furthermore, this issue was relevant for future invalidation proceedings and therefore it was appropriate to take it into account in the appeal proceedings. Moreover, objections on the grounds of added subject-matter had already been discussed in the first-instance proceedings within the context of some of the auxiliary requests.

- 2.5 None of these reasons can justify the admittance of these fresh or non-maintained objections.

By not initially raising or not maintaining these objections, the respondent prevented the opposition division from taking a decision on the matter, which could have been reviewed by the Board. The fact that other objections relating to added subject-matter were discussed and decided upon within the context of some of the auxiliary requests does not change the fact that there is no decision relating to the objections raised against the main request.

Examining these objections in the appeal proceedings would effectively allow a kind of 'forum shopping', i.e. allow the party to choose which instance should deal with a particular objection. This is contrary to the general aim of the appeal proceedings, which is to review the decision under appeal.

Against this background, the alleged *prima facie* relevance of the objections, or their impact on the present or future proceedings, cannot justify the admittance thereof.

- 2.6 In view of the above, the objections on the grounds of added subject-matter are not admitted into the appeal

proceedings (Article 12(4) and (6), second sentence, RPBA).

3. Public availability of the prior-use Polidoro burner, Article 54(2) EPC

3.1 Standard of proof

According to the appellants, the applicable standard of proof in the present case was the one defined as "beyond reasonable doubt" since all of the evidence relating to the alleged public prior use of the Polidoro burner lay within the sphere of respondent 1.

The Board acknowledges in this respect that all of the evidence supporting the alleged public prior use of the Polidoro burner is in the hands of respondent 1. However, what is decisive is whether the coherence of the supporting evidence is enough to convince the deciding body of the public availability of the prior-use device before the priority date.

3.2 Applicable principles for a review in this context

The Board notes that the burden is on the party challenging a fact on appeal to demonstrate that the first-instance department erred in its finding of fact. It was thus for the appellants to demonstrate an error in the opposition division's findings. The mere fact that the evidence could also support different factual findings is not sufficient to demonstrate an error. In addition, the Board has the power, at any stage of the appeal proceedings, to establish the relevant facts of the case (see T 1138/20, Reasons 1.2.4 to 1.2.6).

3.3 Consistency of the original evidence

- 3.3.1 Taking into account the circumstances of the case and the relevant evidence provided, the Board is convinced that the alleged prior use did indeed occur, and this for the following reasons.
- 3.3.2 Leaving aside whether the first two sales of Polidoro burners (invoices P2d and P3c) were subject to secrecy since they related to a "prototype", the third sale (invoices P4 and P4c) took place before the priority date and involved 1 000 units. There is no reason to assume that this third sale was subject to confidentiality or to doubt that it rendered public the sold items.
- 3.3.3 Concerning the question of what was sold in the sale according to invoices P4 and P4c, the reference number 109.0020.00 is provided on these invoices, which relate to the concepts "PREMIX FIBRA" and "L=250", corresponding to the "PREMIX BURNER" with a length of 250 mm and comprising a metal fibre lining represented in P1, a technical drawing in which the same reference number is provided (see box "Cod. N°" at the bottom right-hand corner of P1 and P1*). Further, P1 shows that the perforated metal plate (see "strip" in the box at the bottom left-hand corner of P1*) has the reference number ("code", in P1*) 148.3538.00, which coincides with the reference number of the technical drawing P1a, in which a perforated metal plate is represented in detail. The dates on P1a (see P1a*, "Issuing", 21 March 2008) and on P1 (see P1*, "Updated internal strip", 13 November 2008) are also consistent with each other and with the sales set out in P4 dated 31 July 2009. It is noted that P1 and P1a form the original evidence on which the decision must be taken,

P1* and Pla* merely being the redacted versions of translations thereof (P1T and PlaT) filed for the convenience of the proceedings (see next point).

- 3.3.4 The arguments of the appellants regarding an alleged lack of reliability of P1 and Pla based on the amendments carried out in P1T and P1* are mere assumptions which cannot cast doubt on the original evidence filed (i.e. P1 and Pla, the original versions of which were uncontestedly available to the parties, the opposition division and the Board). As is inherent in their nature, P1T and P1* (and also PlaT and Pla*) are edited documents with respect to P1 and Pla since their purpose was to provide a translation into English (P1T and PlaT) of all the text in P1 and Pla and to provide a copy of the documents which could be rendered publicly available once the confidential information had been redacted (P1* and Pla*). These purposes could not be achieved without amending the content of P1 and Pla. The Board cannot see how modifying the relative sizes of the elements in the drawing P1 or adding further "clarifications" on the burner (which were **not** relevant for the decision on the correspondence between P1 and Pla and the sale proven by P4 and P4c) could cast doubt on the content of the original evidence P1 and Pla, which is the actual proof of what was sold.

Finally, the amendments introduced by the editing do not support a general intention of manipulating the evidence related to the prior use to the extent of rendering the content of P1 and Pla unreliable. Such a serious allegation would have had to be proven by a solid chain of evidence which is not established by the respondents' observations.

- 3.3.5 Similarly, the arguments of the appellants regarding the allegedly suspicious size of the characters in P1 and P1a, the appropriateness of part of the technical information disclosed therein and the differences in the representation of some of the holes are again mere assumptions which cannot cast doubt on the reliability of the original evidence P1 and P1a. None of these arguments have raised objective concerns about the authenticity of the original evidence P1 and P1a.
- 3.3.6 Finally, the fact that the emails in P4b refer to the product in a different manner ("310-burner") cannot cast doubt on the data in invoices P4 and P4c, which constitute evidence of what was delivered. Furthermore, the explanations of respondent 1 about "310" being the approximate diameter of the premix burner represented in P1 are convincing since it is not uncommon to refer to a product in a more informal and pragmatic way in an email exchange than in an invoice.
- 3.3.7 Since the allegations of fact of the appellants based on the assumptions cited in points 3.3.4 and 3.3.5 are not convincing in substance, the admittance thereof under Article 13(2) RPBA does not need to be discussed.

3.4 Conclusion

The Board sees no reason to set aside the decision of the opposition division with respect to the public availability of the prior-use Polidoro burner before the priority date. The gas burner disclosed in P1 and P1a is therefore part of the prior art within the meaning of Article 54(2) EPC.

4. Main request, novelty, prior use of the Polidoro burner, Article 54(2) EPC

4.1 The burner deck defined in claim 1

Feature 5 of claim 1 reads: "*said perforation in said cylindrical perforated metal plate **providing** a burner deck*" (emphasis added).

Features 6 to 8 define different parameters relating to the porosity of such a burner deck.

4.2 The disclosure of P1 and P1a

4.2.1 It is not contested that the alleged public prior use of the Polidoro burner relates to a gas burner comprising a cylindrical perforated metal plate (see P1*, reference number (1), "strip") and a metal fibre mesh (see P1*, reference number (4), "Fiber", "Basis layer") arranged over the cylindrical perforated metal plate. It is also uncontested that the cylindrical metal plate of the Polidoro burner - considered *per se* without the fibre metal mesh - has a porosity in the range defined in features 6 to 8.

However, the cylindrical metal plate *per se* is not what the skilled person would understand as being the "burner deck" of the Polidoro burner, as explained in the following paragraphs.

4.2.2 The question to be answered is: For the skilled person, what is the "burner deck" of the prior-use gas burner of Polidoro?

4.2.3 The assessment is to be made independently of whether the gas burner is in use or not but it must be made on the **complete** gas burner ready to be used. The prior-use gas burner of Polidoro must be regarded **as a whole**

since it is in this form that it has been made available to the public.

Any considerations about how this gas burner would behave without its fibre metal mesh are irrelevant for the discussion about novelty since such a hypothetical device would not be the prior-use gas burner of Polidoro that was made available to the public. A hypothetical gas burner without a fibre metal mesh is simply not disclosed by P1 and P1a, let alone the use of such a gas burner. Consequently, the reasoning of the opposition division based on the alleged suitability of the cylindrical perforated metal sheet disclosed in P1 and P1a "*to function as a burner deck*" (see points II.10.3.2 and II.10.3.3 of the contested decision) and the arguments of the respondents about how the device of P1 and P1a would work without the metal fibre mesh (4) are irrelevant.

- 4.2.4 The respondents argued that the alleged distinguishing features of claim 1 based on an external position of the burner deck or on the function of the latter as a "flame holder" were not defined in claim 1 and thus could not be limiting.

It is true that claim 1 does not define explicitly the position of the burner deck or the flame; however, the skilled person looking at P1 would not understand the cylindrical perforated metal plate (1) in isolation to be the "burner deck" since they would understand that this element works **together** with the metal fibre mesh (4) as a structural and functional unit to perform the role of distributing the gas and holding the flame.

Consequently, the skilled person who is asked to identify a "burner deck" in the device disclosed in P1

would select either the metal fibre mesh or the combination of the perforated metal plate (1) plus the metal fibre mesh (4). The skilled person would not consider the cylindrical perforated metal plate (1) located behind the metal fibre sheet in isolation from its structural and functional context to be a "burner deck".

The Board agrees with the respondents that the function of the burner deck as a "flame holder" is not explicitly defined in claim 1. However, this does not change what the skilled person would understand to be the "burner deck" of the prior-use burner of Polidoro and it certainly does not take away the association discussed above - implicit to a certain extent in the term "burner deck" itself - with the place where the combustion takes place. Therefore, the respondents' arguments based on where the flame would be located during the operation of the Polidoro prior-use device cannot change the above considerations and therefore the question of the admittance thereof (Article 13(2) RPBA) can be left undecided.

For the sake of completeness, it should be noted that it has never been argued that either the mesh alone or the combined "perforated metal plate plus mesh" structure would have a porosity in accordance with features 6 to 8.

- 4.2.5 The respondents argued that the general meaning of "deck" was that of a structural element of support and that exactly this was the role of the perforated cylindrical metal plate (1) of P1 and P1a. Therefore, feature 5 was disclosed in the prior-use burner of Polidoro.

This is not persuasive since the claim does not refer to a "deck" in isolation, but to a "burner deck". In addition to this, there is no evidence for the alleged meaning of "deck" in the technical field of gas burners as being a structural element of support for the flame-holding outer surface which could be isolated from the working ensemble formed by the cylindrical perforated metal plate (1) and the metal fibre mesh (4) acting together as a single piece distributing the gas and holding the flame.

- 4.2.6 The respondents also put forward that the metal fibre mesh (4) of P1 would not be considered part of the burner deck since feature 5 defined that only the perforations of the cylindrical metal plate provided the burner deck.

This reasoning is not convincing either since what has to be considered is what the skilled person understands to be the "burner deck" when considering the prior-use burner of Polidoro. As has been explained above, faced with that question, the skilled person would not consider the internal portion of a working ensemble to be the "burner deck" - thereby ignoring the mesh with which the plate is in close structural and functional cooperation - but would instead regard the entirety of the ensemble as the "burner deck" of the P1 gas burner.

The fact that this does not coincide with the definition of feature 5 is precisely what provides the novelty of the subject-matter of claim 1. The burner deck in the prior-use burner of Polidoro is not **provided** by the perforations in the cylindrical perforated metal plate but by the ensemble of such a cylindrical perforated metal plate **plus** a metal fibre mesh. In other words, the definition of feature 5 does

not change the skilled person's understanding of the term burner deck; on the contrary, it is because of the skilled person's understanding of the term burner deck that feature 5 is not fulfilled by the Polidoro burner.

The claim defines a particular type of burner with a cylindrical perforated metal plate, the perforations in said cylindrical perforated metal plate **providing** the burner deck. The explanations in the patent specification are fully consistent with this definition.

This is also consistent with what the skilled person would understand to be the "burner deck" in the Polidoro burner as explained above. In particular, the exclusion of - in opponent 3's own words - the tightly woven mesh, which forms a close unit with the underlying plate, from what is understood to be the "burner deck" is not in accordance with the skilled person's understanding of the term.

4.2.7 E17 as a means to interpret the feature "burner deck" in the patent

E17 does not prove that the feature "burner deck" in the patent would be understood in a different manner by the skilled person since it merely discloses that a gas burner comprising a perforated metal plate *"is also suitable for burners of the combustion type on fabric, wherein the side surface is covered by a metal or ceramic fabric layer"*. E17 does not use the wording "burner deck" for the metal plate below such covering fabric and does not disclose what would be understood as a "burner deck" when a metal fabric layer covers the perforated metal plate.

Paragraph [0002] of the patent specification merely states that E17 discloses the kind of burner deck of the invention - as can be seen in Figures 1 or 2, for example - but this does not imply that E17 cannot disclose other burner decks. Concerning Figures 2c and 4 to 9 of the patent specification, the Board does not agree that they disclose a further element arranged above the cylindrical perforated metal plate similar to the metal fibre mesh cited in E17. The figures must be considered together with the patent specification in order to ascertain what they disclose. Reference number (22) - which is assigned to the alleged "further element" in the figures - is consistently disclosed as corresponding to the "perforated metal plate" in the description in connection with the figures, said perforated plate comprising a perforation pattern "repeated over the circumference of the burner" (see column 4, line 38; column 5, lines 20 to 22 and 41 to 50; and column 6 lines 12 to 14, 25 to 27 and 31 to 39).

Since E17 is *prima facie* unconvincing in support of the respondents' allegations, it is unnecessary to enter into a discussion on the admittance of the statements of fact based on this document submitted by respondent 1 for the first time less than two weeks before the oral proceedings on appeal (Article 13(2) RPBA).

4.3 Conclusion

The subject-matter of claim 1 differs from the prior-use device of Polidoro in feature 5 ("*said perforation in said cylindrical perforated metal plate providing a burner deck*") and consequently also in features 6 to 8

of the burner deck, and is therefore novel over this prior art (Article 54(2) EPC).

5. Remittal - Article 111(1) EPC, Article 11 RPBA

5.1 Primary object of the appeal proceedings -
Article 12(2) RPBA

As has been repeatedly stated in the jurisprudence of the boards, the primary object of the appeal proceedings is to **review** the decision under appeal in a judicial manner (see Case Law of the Boards of Appeal, 10th edition, V.A.1.1; see also Article 12(2) RPBA).

By examining the considerations of the opposition division and concluding that the main request does overcome the only substantive objections dealt with by the opposition division (i.e. novelty with respect to the prior-use device of Polidoro and sufficiency of disclosure), the Board has reviewed the decision under appeal to the extent reasonably possible.

5.2 Objections for which no decision to be reviewed exists

Any further examination of the case would entail the Board dealing for the first time with objections on which no decision to be reviewed exists.

Numerous further objections against the main request were raised by the respondents in connection with Articles 56 and Article 100(c) EPC (i.e. added subject-matter in connection with **granted** claims), as well as further objections in relation to a lack of novelty with regard to documents other than D1, such as E4 and P10.4. The latter relates to the alleged public prior use of the Worgas burner, which was not dealt with in

the appealed decision. It is noted that in the context of the alleged prior use of the Worgas burner, the respondents requested the hearing of three witnesses (Mr. Turco, Mr. Barozzi and Mr. Mach), see the letter of 25 February 2022, point 3.4.3).

This would entail a considerable fact-finding exercise which by far exceeds the primary object of reviewing the impugned decision. The Board therefore considers there to be special circumstances for remitting the case within the meaning of Article 11 RPBA.

5.3 Respondent 1's position

Respondent 1 put forward that the "purely legal argument" relating to the alleged absence of a technical effect over the whole breadth scope of protection of claim 1 should be dealt with by the Board.

This is not persuasive.

Firstly, there is no reason for the Board to deal with an isolated sub-aspect of the requirements of Article 56 EPC before the opposition division has even addressed this ground for opposition, and without knowledge of the outcome of the examination of further allegedly novelty-destroying disclosures or what the differentiating feature might be in that respect.

Secondly, the argument about the applicability of T 939/92 in the present case is not "purely legal"; it requires an in-depth analysis of the technical effect. Even if the technical effect given in the patent were too ambitious, this would not imply that there is no inventive step involved; it may instead lead to a

reformulated, less ambitious objective technical problem.

5.4 Conclusion

In view of the above, the Board has decided to remit the case to the opposition division for further prosecution (Article 111(1) EPC).

6. Alleged procedural violation in the opposition proceedings and request for reimbursement of the appeal fee - Rule 103(1) (a) EPC

6.1 The appellants made no further submissions relating to this issue after the issuance of the Board's communication under Article 15(1) RPBA. The Board thus confirms the opinion explained in that communication.

6.2 The appellants argued that the opposition division committed a substantial procedural violation when it refused to even briefly explain its reasoning behind the decision not to allow auxiliary request 3. This deprived the appellants of the opportunity to file a further auxiliary request to overcome the objections posed, since several arguments against auxiliary request 3 had been presented by the opponents and the appellants had not been told which of these had been considered relevant by the opposition division. Since this refusal to explain the reasoning of the opposition division affected the appellants' right to be heard and had a significant impact on the outcome of the first-instance proceedings, the appeal fee should be reimbursed.

6.3 The appellants' arguments are not convincing. There is no general obligation for an opposition division to

explain its specific reasons for a decision during oral proceedings. Those reasons will be set out in the written decision (cf. Rules 111(1) and (2) EPC). Furthermore, according to the minutes, which have not been contested, the only fully substantiated objection relating to Article 123(2) EPC was raised by opponent 2 and was specific enough that - once the opposition division had announced that auxiliary request 3 was not allowable on the grounds of Article 123(2) EPC - the reasons for the announced decision were apparent (see points 13.2, 13.3 and 13.6.2 of the minutes).

6.4 Moreover, in order for the reimbursement to be equitable, a causal link must exist between the alleged procedural violation and the need for the appellants to file an appeal.

No procedural violation has been alleged with respect to the way the opposition division dealt with the main request (corresponding to the main request dealt with in the decision).

The appellants thus had to file an appeal in any case in order to request the maintenance of the patent according to the main request. This was unrelated to the fact that the opposition division refused to provide further explanations as to why auxiliary request 3 was not considered to be compliant with Article 123(2) EPC.

There is thus no causal link between this refusal of the opposition division and the filing of the appeal, and a reimbursement is not equitable under these circumstances.

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 for further prosecution.
3. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairman:



C. Spira

C. Herberhold

Decision electronically authenticated