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**Datasheet for the decision
of 9 March 2023**

Case Number: T 0934/20 - 3.2.03

Application Number: 10776422.7

Publication Number: 2486330

IPC: F24D5/08, F24D12/02, F24H6/00,
F24H8/00, F24D1/00

Language of the proceedings: EN

Title of invention:

HIGH EFFICIENCY DEVICE FOR HEATING ENVIRONMENTS AND HEATING
SYSTEM COMPRISING SUCH DEVICE

Patent Proprietor:

Officine Termotecnica Fraccaro S.r.l.

Opponent:

Carlieuklima S.r.l./Systema S.p.A./
Impresind S.r.l.

Headword:

Relevant legal provisions:

EPC Art. 111, 123(2)
EPC R. 80, 103(1)(a)
RPBA 2020 Art. 13(2)

Keyword:

Amendments - allowable (no) - disclosure in drawings -
extension beyond the content of the application as filed (yes)
- intermediate generalisation
Amendment after summons - exceptional circumstances (no) -
taken into account (no) - cogent reasons (no)
Substantial procedural violation - reimbursement of appeal fee
(no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 0934/20 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 9 March 2023

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 11 February
2020 revoking European patent No. 2486330
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman C. Herberhold
Members: R. Baltanás y Jorge
A. Jimenez

Summary of Facts and Submissions

- I. European patent No. 2 486 330 relates to a *"high efficiency device for heating environments and heating system comprising such device"*.
- II. An opposition was filed against the patent, which was based on Article 100(c) EPC, Article 100(b) EPC and Article 100(a) EPC together with Articles 54 and 56 EPC.
- III. The present appeal lies from the decision of the Opposition Division in which the European patent was revoked. The Opposition Division decided not to admit the request for correction of granted claim 1 under Rule 139 EPC. It further decided that the ground for opposition based on Article 100(c) EPC prejudiced the maintenance of the patent as granted, that auxiliary request 1 (filed during oral proceedings) as well as auxiliary requests 7, 8 and 9 were not allowable under Article 123(3) EPC, that auxiliary requests 3, 4, 5 and 6 were not allowable under Article 123(2) EPC, and that the requests for correction under Rule 139 EPC of auxiliary requests 3, 4 and 5 were not allowable. The opposition division also decided not to admit auxiliary request 2 (filed during oral proceedings) according to Rule 116(2) EPC.

The patent proprietor (hereinafter: the "appellant") filed an appeal against the above-mentioned decision of the Opposition Division.

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 of the case.

Oral proceedings were held on 9 March 2023. The appellant filed a new auxiliary request (auxiliary request A) during the oral proceedings.

IV. Requests

The appellant requested that the decision under appeal be set aside, that the Board examine the main request filed with the statement of grounds of appeal for compliance with Article 123(2), Article 123(3) EPC and Rule 80 EPC, and that the case be remitted to the Opposition Division for further prosecution on the basis of the main request or of auxiliary request A, filed during the oral proceedings, together with a refund of the appeal fee, or, in the alternative, that the patent be maintained based on the main request filed with the statement of grounds of appeal or auxiliary request A filed during the oral proceedings.

The respondent (opponent) requested that the appeal be dismissed.

V. Claim 1 of the **main request** (corresponding to the request for correction under Rule 139 EPC which was not admitted by the Opposition Division), including the numbering of its features as adopted by the parties, reads as follows (features amended with regard to granted claim 1 are marked in bold):

- a) *A system for heating of rooms, comprising*
- b) *at least one first radiant device (1) and at least one second heating device (22) located in a same room (A) for heating it in combination with said*

first device (1), said first radiant device (1) comprising:

- c)** *- a burner (2) with a combustion chamber (5);*
- d)** *- a chimney (4) in fluid connection with said chamber (5) for the expulsion of the combustion products of said burner (2);*
- e)** *- heating means (3) operably connected with said combustion chamber (5) and designed to produce a heating carrier fluid comprising at least one gaseous phase; wherein*
- f)** *said heating means (3) comprise a radiant circuit (9) having*
- g)** *a closed-loop conduit (10) with an outer heat-conducting radiating surface (12) designed for direct contact with the room (A) for radiance heating thereof,*
- h)** *said combustion chamber (5) having an outlet (8) for said combustion products*
- i)** *directly connected to said radiant circuit (9)*
- j)** *or operably interacting with a steam generator (15) which is in fluid connection with said radiant circuit (9);*
- k)** *wherein said chimney (4) comprises a heat recuperator (16) for at least partial recovery of sensible heat and latent heat from the combustion products of said burner (2),*
- l)** *said heat recuperator (16) comprising a heat exchange chamber (23) for the flow of the combustion products of said burner (2) and*
- m)** *a secondary circuit (17) housed into said heat exchange chamber (23) for a recuperator fluid to flow therethrough;*
- n)** *wherein said exchange chamber (23) has an inlet (24) in fluid connection with said burner (2) for collecting the combustion products thereof and*

- o)** *an outlet (25) in fluid connection with the outside; characterized in that*
- p)** *said at least one second heating device (22) contains a heating circuit (21), said secondary circuit (17) having an outlet (19) connected to said heating circuit (21) located in the same room (A) for at least partially returning the recovered heat thereto,*
- q)** *said chimney (4), said heat recuperator (16) and said secondary circuit (17) being located outside of said room (A),*
- r)** *said secondary circuit (17) having an inlet (18) for a recuperator fluid,*
- s)** *said heating circuit (21) of said at least one second heating device (22) having an inlet (20) in fluid connection with said outlet (19) of the secondary circuit (17)*
- t)** *and an outlet (37) in fluid connection with the inlet (18) of said secondary circuit (17)*
- u0)** *with suitable cooling ~~—and—~~ **fluid** pumping means interposed therebetween (32) to circulate in a closed loop the recuperator fluid acting as a heat carrier*
- v)** *to return the extracted heat directly to the room (A) with no further intermediate heat exchange.*

VI. Claim 1 of auxiliary request A filed during the oral proceedings is based on claim 1 of the main request, but wherein features u0) and v) have been replaced by the following features u1) and v1) (amended features marked in bold):

- u1)** *with suitable cooling ~~—and—~~ **fluid** pumping means (32) **and a valve (33)** interposed therebetween ~~—(32)—~~, **said cooling fluid pumping means (32) and***

said valve (33) being located outside the room (A)
to circulate in a closed loop the recuperator
fluid acting as a heat carrier, **said burner (2)**
with a fan (13) being located in a box-like body
(14) located in the room (A),

v1) wherein said at least one second heating device
(22) comprises a plurality of radiant tubes (36)
placed in the room (A) for radiance heating
thereof, said heating circuit (21) being
constituted by said radiant tubes (36) to return
the extracted heat directly to the room (A) with
no further intermediate heat exchange.

VII. The appellant's arguments can be summarised as follows.

Main request

The amendments in feature u0) of the main request
overcame a ground for opposition and the request was
therefore compliant with Rule 80 EPC. In this respect
the appellant had not, however, been properly heard.

Feature q) (chimney, heat recuperator and secondary
circuit being located outside of the room) was based on
originally filed Figures 4a and 4b. The skilled person
was aware - thanks to their common general knowledge -
that arranging a chimney and a heat recuperator outside
a room was preferable for safety reasons. The location
of other elements such as the pump and the valve did
not address the same technical problem and,
consequently, the skilled person did not consider that
the position of other elements such as these was
inextricably linked to the location of the chimney and
the heat recuperator. More particularly, the location
of the pump and the valve was not relevant to the
exchange of heat of the system, and the patent

application did not disclose any technical problem that was addressed by their particular position.

The features defined in feature v) (to return the extracted heat directly to the room with no further intermediate heat exchange) applied to both embodiments originally disclosed corresponding to Figures 4a and 4b. In both cases there was a single passage of heat from the recuperator fluid in a direct manner and without any further intermediate heat exchange. Lines 28 and 29 of originally filed page 11 disclosed that the direct return of extracted heat could take place by convection - as in the embodiment of Figure 4a - or by radiation - as in the embodiment of Figure 4b -, as (was) also disclosed in originally filed claims 14 and 15. There was thus just one transfer of extracted heat, be it to the air or by radiation. In the latter case, heat was likewise transferred from the recuperator fluid to the tubes before radiation took place, but the skilled person understood that this corresponded to a direct return of the extracted heat without further intermediate heat exchange, as in feature v).

Auxiliary request A

As the appellant's right to be heard had not been respected during the oral proceedings before the Opposition Division, this qualified as an exceptional circumstance that allowed the amendments in auxiliary request A to be taken into account within the meaning of Article 13(2) of the Rules of Procedure of the Board of Appeal 2020 (RPBA 2020).

Since no request overcoming the objections under Article 100(c) EPC had yet been found allowable, the appellant had to file a new request to this end - in

line with the considerations in point 21 of the Board's preliminary opinion.

The objections based on features q) and v) had never been discussed before the Opposition Division. Although these objections were raised in the respondent's reply to the statement setting out the grounds of appeal, they had, likewise, never been discussed before the Board until the oral proceedings.

Furthermore, the admittance of auxiliary request A did not result in any disadvantage for the respondent, since it would have had ample time to prepare for a discussion on novelty and inventive step once the case was remitted to the Opposition Division.

VIII. The respondent's arguments can be summarised as follows.

Main request

There was no disclosure in the description as originally filed of feature q) (chimney, heat recuperator and secondary circuit being located outside of the room). The single basis alleged for this feature was to be found in Figures 4a and 4b. However, according to the "gold standard" used at the EPO, taking features in isolation from figures was only allowable if there was a teaching in terms of function of the feature concerned. The originally filed application did not provide such a teaching, since there was no disclosure of the purpose or function of the location of the different elements of the circuit. Consequently, the skilled person considered the location of all the elements of the circuit disclosed in Figures 4a and 4b as a whole and had no reason to

regard the positioning of only some of the elements in isolation from the others as being part of the invention. Furthermore, a portion of the chimney was even disclosed inside the room in Figures 4a and 4b. In view of the above, defining in feature q) the specific location of only three arbitrary elements of the circuit selected from among all the components shown in a particular positioning and context in the figures extended the subject-matter of claim 1 in an unallowable manner.

Concerning feature v), the only disclosure of "returning the extracted heat directly to the room with no further intermediate heat exchange" was on the originally filed page 12, lines 24 to 27. This passage concerned the embodiment using radiant tubes only, corresponding to Figure 4b. The embodiment corresponding to Figure 4a - which was based on a further heat exchange, namely with forced air - did not comply with feature v), since it encompassed a second step in terms of heat exchange. Both embodiments comprised tubes enclosing the recuperator fluid, but only the embodiment based on radiant tubes heated the elements of the room without a further vector, in contrast with the embodiment where air was used as a further medium to bring the heat to the room. The disclosure in lines 28 and 29 of the originally filed page 11 did not concern "direct heating", a concept which was only raised in lines 24 to 27 of page 12. Consequently, the skilled person understood from the originally filed application that the only direct return of extracted heat, with no further intermediate heat exchange, was to be carried out by means of the radiant tubes. Since this feature was missing in claim 1, an unallowable intermediate generalisation had occurred.

Auxiliary request A

All objections against granted features q) and v) had already been raised in the notice of opposition and had thus been known to the appellant from the beginning of the opposition proceedings. The objections had been repeated in the reply to the statement setting out the grounds of appeal. Under these circumstances, the filing of a new request on the day of the oral proceedings before the Board was procedurally unfair. No exceptional circumstances justified by cogent reasons were presented by the appellant, since the communication of the Board under Article 15(1) RPBA 2020 did not amount to such an exceptional circumstance. Regarding the alleged procedural violation, there was no causal link between the objections against granted features q) and v) and the appellant not having been heard on admittance of a request dealing with the totally different objection against feature u). The appellant could and should have filed amendments aimed at overcoming the objections against features q) and v) much earlier.

Reasons for the Decision

1. Main request - Article 100(c) EPC

1.1 Feature q) (said chimney, said heat recuperator and said secondary circuit being located outside of said room)

Feature q) was added to claim 1 during the examination proceedings.

The appellant argued that the skilled person knew from their common general knowledge that locating a chimney and a heat recuperator outside a room addressed the problem of improving safety.

Firstly, the Board agrees that safety might be recognised as an issue by the skilled person in the case of the (largest part of the) chimney, but the safety issue alone cannot justify the isolated selection of its location in feature q) on the basis of originally filed Figures 4a and 4b. The alleged implicit safety problem addressed by the claimed location of the chimney is not applicable to the heat exchanger and the secondary circuit - which are also included in feature q) -, since these elements are not generally identified as a risk by the skilled person and they could also be arranged in the (small) portion of the chimney located inside the room (see Figures 4a and 4b) .

Secondly, the heating circuit is disclosed in Figures 4a and 4b as a whole. The description does not disclose any technical problem addressed by the particular positioning of the different elements (taken individually or in groups), as acknowledged by the appellant. The respective elements are structurally and functionally linked within the circuit, the circuit having a particular location with respect to inside and outside of the room. The skilled person thus had no reason to assume that the location of the chimney, heat recuperator and secondary circuit as represented in Figures 4a and 4b was independent of that of the other components of the heating system, such as the pump (32), the valve (33), the burner (2), which are likewise represented in these drawings.

Instead, Figures 4a and 4b disclose the circuit as a whole, with all its elements being arranged in a particular location. Isolating, in feature q), the location of three particular elements from this disclosure results in new technical information within the meaning of G2/10, and thus constitutes an unallowable amendment.

- 1.2 Feature v) (to return the extracted heat directly to the room with no further intermediate heat exchange)

Feature v) inserted the following amendments into originally filed claim 1 (marked in bold):

*to return the extracted heat **directly** to the room
(A) **with no further intermediate heat exchange***

The single explicit disclosure about returning the extracted heat directly to the room with no further intermediate heat exchange is in lines 25 to 27 of page 12 of the originally filed application (i.e. the PCT publication): "*As a result, the heating fluid also acts as a heat carrier fluid, and heats the room A directly, with no further intermediate heat exchange*".

The corresponding paragraph begins with the wording "*In **this** embodiment...*" (emphasis by the board), which makes direct reference to the **embodiment of Figure 4b** (see the immediately preceding paragraph, on page 12, lines 20 to 22). This embodiment is explicitly envisaged as an alternative to the embodiment of Figure 4a, where a further intermediate heat exchange (using forced convection of air) occurs (see page 11, last line, to page 12, line 18). Instead of using the forced convection of air for transferring heat to the room (i.e. **to heat the elements** of the room), the

embodiment of Figure 4b heats the room by radiant heating using a main body with a plurality of radiant tubes (page 12, lines 20 to 22).

Consequently, the description does not disclose that both embodiments corresponding to Figures 4a and 4b return the extracted heat directly to the room with no further intermediate heat exchange. Instead, the originally filed application makes clear in an explicit manner that this is the case only in the embodiment of Figure 4b, where the extracted heat is returned by radiation if using the corresponding heating device.

The appellant's argument about an alleged single passage of heat from the recuperator fluid being at play in both embodiments is not persuasive, since the application explicitly discloses that forced convection of air is used in the first embodiment (Figure 4a) whereas heat is directly transmitted by radiation in the second one (Figure 4b). The fact that the recuperator fluid is contained in tubes in both cases - such that a heat transfer occurs between the recuperator fluid and these tubes - is immaterial for assessing whether a transfer of heat as in feature q) occurs, since the recuperator fluid has to be contained in a circuit anyway.

Contrary to what was argued by the appellant, neither lines 28 and 29 of the originally filed page 11 nor originally filed claims 14 and 15 disclose that both convection and radiation can transfer the extracted heat directly to the room **with no further intermediate heat exchange**. The passage on page 11 merely discloses how the second heating device may heat the room, and it provides this disclosure **before** the embodiments of Figures 4a and 4b are disclosed in detail.

Consequently, the first passage (i.e. that on lines 28 and 29 of originally filed page 11) would not be understood by the skilled person as disclosing mechanisms for a return of extracted heat described in a passage which is only disclosed later on.

Claims 14 and 15 as filed define a second heating device with means for forced convection of outside air on the heating circuit and introduction of the air so heated into the room (claim 14) and with a plurality of radiant tubes (claim 15). However, neither these claims nor the claims from which they depend define a return of the extracted heat directly to the room "with no further intermediate heat exchange" as claimed in feature v).

Thus, as feature v) is broached in isolation from the only means originally disclosed for achieving a return of the extracted heat "directly to the room with no further intermediate heat exchange" (i.e. without the main body with a plurality of radiant tubes), an unallowable intermediate generalisation arises.

- 1.3 In view of the above, the subject-matter of claim 1 of the main request extends beyond the content of the originally filed application in an unallowable manner (Article 123(2) EPC).
2. Auxiliary request A - Article 13(2) RPBA 2020
- 2.1 According to Article 13(2) RPBA 2020, any amendment to a party's appeal case made after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

2.2 Auxiliary request A was filed at the last possible moment, i.e. at the end of the oral proceedings before the Board.

2.3 The arguments of the appellant concerning a substantial procedural violation which would qualify as an "exceptional circumstance" are not persuasive, for the following reasons.

The opposition division decided **not to admit** into the proceedings the request for correction under Rule 139 EPC (see point II.2) which corresponds to the current main request.

This decision was based exclusively on the Opposition Division's view that the amendment in feature u0) was in violation of Rule 80 EPC.

Even if the appellant was apparently not sufficiently heard with respect to the objection against feature u0), on which the decision of the Opposition Division was based (see point 16 of the Board's communication dated 5 December 2022), there is no link between this alleged substantial procedural violation and the amendments in auxiliary request A. The latter request was filed in order to address objections which had been known since the start of the opposition proceedings and which are not connected with feature u0) - feature u0) being the only amendment carried out in the main request that was affected by the substantial procedural violation.

2.4 The amendments in features u1) and v1) are aimed at overcoming the objections based on Article 100(c) EPC against granted features q) and v). These objections

were already raised in points 1.1 and 1.2 of the notice of opposition. The appellant had thus been aware of their existence since the very beginning of the opposition proceedings and did not address them completely by way of amendment at that stage as they did in the case of auxiliary request A. The objections were repeated in point 1.3 of the reply to the statement setting out the grounds of appeal, but the appellant did not address them by way of amendments. The Board's communication under Article 15(1) RPBA 2020 sided with the respondent with respect to the same objections. Still, none of the auxiliary requests 1 to 5 filed by the appellant with its letter dated 3 February 2023 in response to the Board's communication corresponded to auxiliary request A. The appellant withdrew auxiliary requests 2 to 5 at the beginning of the oral proceedings before the Board and replaced auxiliary request 1 with auxiliary request A only at the end of the oral proceedings, thereby further amending its case at the last possible moment.

- 2.5 Contrary to the appellant's interpretation, point 21 of the Board's communication under Article 15(1) RPBA 2020 does not imply that the aim of the appeal proceedings was to keep on examining new requests until one of them was found allowable. Point 21 merely announced the intention of the Board to remit the case to the Opposition Division for further prosecution in the event of one request - i.e. one of the requests on file in the appeal proceedings at the time of writing of the communication - being found to fulfil the requirements of Article 84 and Article 123(2) and (3) EPC. This does not imply that new requests were to be admitted in an unconditional manner, which would be contrary to the legal framework concerning admittance of late-filed requests and the case law related thereto

(Article 13(2) RPBA 2020) (see Case Law of the Boards of Appeal, 10th edition, V.A.4.5).

2.6 The fact that the objections based on features q) and v) had been never discussed before the Opposition Division and that the first discussion about them did indeed take place at the oral proceedings before the Board is not an exceptional circumstance either. Patent proprietors need to be aware that the Opposition Division or the Board might agree with an objection which was filed in a timely manner by an opponent and need to take appropriate measures in time.

2.7 Finally, the argument of the appellant concerning the alleged lack of any disadvantage for the respondent in the event of auxiliary request A being admitted is not persuasive.

The admittance of auxiliary request A filed during the oral proceedings would confront the respondent (and the Board) with a new request, which would have to be analysed on the spot - among other things - with respect to the amendments possibly creating new issues with regard to Articles 84 and 123(2) EPC. This would place the respondent in a procedurally disadvantageous position.

2.8 In view of the above, the Board cannot see exceptional circumstances justified by cogent reasons which speak in favour of admitting auxiliary request A, and the request is consequently not admitted (Article 13(2) RPBA 2020).

3. Dismissal of the appeal

In the absence of an allowable request, the appeal must be dismissed.

4. Refund of the appeal fee

The conditions for refund of the appeal fee when a decision on an appeal is finally issued after oral proceedings are set out in Rule 103(1)(a) EPC. This legal provision only provides for the reimbursement of the appeal fee *"where the Board of Appeal deems an appeal to be allowable"*. Since the current appeal is not allowable, there is no legal basis for ordering the refund of the appeal fee. Thus, the request of the appellant in this regard must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:



C. Spira

C. Herberhold

Decision electronically authenticated