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Datasheet for the decision of 27 January 2020

Case Number: T 2045/16 - 3.2.05

Application Number: 08169234.5

Publication Number: 2186613

IPC: B29B13/06, F26B21/12, F26B17/12, F26B9/06

Language of the proceedings: EN

Title of invention:
High-efficiency system for dehumidifying and/or drying plastic materials

Patent Proprietor:
Piovan S.P.A.

Opponents:
Moretto S.P.A.
Plastic Systems S.p.A.

Relevant legal provisions:
EPC Art. 84
RPBA Art. 13

Keyword:
Admissibility of the requests on file (no)

Decisions cited:
G 0003/14

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Case Number: T 2045/16 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 27 January 2020

Appellant I: (Opponent 1)	Moretto S.P.A. Via dell'Artigianato, 3 35010 Massanzago (Padova) (IT)
Representative:	Gianluigi Zanettin Jacobacci & Partners S.p.A. Piazza Mario Saggin, 2 35131 Padova (IT)
Appellant II: (Opponent 2)	Plastic Systems S.p.A. Via G. Marconi, 6 35010 Borgoricco (PD) (IT)
Representative:	Carlo Susanetto Cantaluppi & Partners S.r.l. Piazzetta Cappellato Pedrocchi, 18 35122 Padova (IT)
Respondent: (Patent Proprietor)	Piovan S.P.A. Via delle Industrie, 16 30036 Santa Maria Di Sala (IT)
Representative:	Pietro Crugnola Luppi Intellectual Property Srl Viale Corassori, 54 41124 Modena (IT)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 6 July 2016 concerning maintenance of the European Patent No. 2186613 in amended form.**

Composition of the Board:

Chairman	P. Lanz
Members:	O. Randl
	T. Karamanli

Summary of Facts and Submissions

I. Both opponents 1 and 2 filed an appeal against the decision of the opposition division on the amended form in which European patent No. 2 186 613 ("the patent") could be maintained.

II. The parties were summoned to oral proceedings to be held on 27 January 2020 by communication dated 4 June 2019.

III. A communication of the board pursuant to Article 15(1) RPBA 2007 was issued on 12 September 2019. The board gave its provisional opinion that the sole request on file did not comply with the requirements of Articles 84 and 123(2) EPC.

IV. By letter dated 24 December 2019 the respondent filed a new main request and three auxiliary requests.

V. By letter dated 10 January 2020 the respondent added a new third auxiliary request. Former auxiliary request 3 became auxiliary request 4.

VI. The oral proceedings before the board took place on 27 January 2020.

After the board had decided to exercise its discretion under Rule 13 RPBA 2007 not to admit the main request then on file, the respondent filed a new main request and new auxiliary requests 1 to 3. The former auxiliary requests 1 to 4 were maintained as auxiliary requests 4 to 7. Auxiliary request 7 was later withdrawn.

After the board had decided to exercise its discretion under Rule 13 RPBA 2007 not to admit auxiliary requests 1 to 6, the respondent filed a new auxiliary request 7.

VII. Both appellants I and II (opponents 1 and 2) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the decision under appeal be set aside and that the European patent be maintained in amended form according to the main request filed during the oral proceedings of 27 January 2020 or, as an auxiliary measure, according to one of the first to third auxiliary request filed during the oral proceedings of 27 January 2020, or according to one of the fourth and fifth auxiliary requests filed by letter dated 24 December 2019 as first and second auxiliary requests, or the sixth auxiliary request filed by letter dated 10 January 2020 as third auxiliary request, or the seventh auxiliary request filed during the oral proceedings of 27 January 2020.

VIII. Claim 1 of the main request reads as follows (the feature references used by the board are given in square brackets):

[**1**] System for dehumidifying and/or drying plastic materials, comprising:

- [**2**] at least one generator (G) of dried and/or dehumidified process fluid;
- [**3**] hoppers (T1 , T2, …, Tn) containing the plastic material (P) to be dried and/or dehumidified, inside which said process fluid is introduced;

- [**4**] a circuit (C) for the circulation of the process fluid connecting said generator (G) to said hoppers (T1, T2, …, Tn), wherein [**5**] said circuit (C) of the process fluid is closed and comprises at least one delivery section (Cl) of the process fluid from said generator (G) to said hoppers (T1, T2, …, Tn) and at least one return section (C2) of the process fluid from said hoppers (T1, T2, …, Tn) to said generator (G), [**6**] each hopper (T1, T2, …, Tn) being connected to said delivery section (Cl) through a process fluid inlet duct (D1) and to said return section (C2) through an outlet duct (D2), wherein [**7**] said hoppers (T1, T2, …, Tn) are connected in parallel in said circuit (C) between said delivery section (C1) and said return section (C2);
- [**8**] one or more on-off and adjusting valves (V) for modulating the flow rate of process fluid to each one of said hoppers (T1, T2, …, Tn);
- [**9**] one or more sensors and/or devices (S) for measuring the flow rate of process fluid to each one of said hoppers (T1, T2, …, Tn);
- [**10**] one or more devices (LC) for measuring the quantity of material to be dehumidified drawn and/or delivered from/to each hopper (T); wherein [**11-1**] said devices (LC) for measuring the quantity of material to be dehumidified drawn and/or delivered from/to each one of said hoppers (T1, T2, …, Tn) comprise weighing devices (LC), or [**11-2**] wherein the system comprises devices (LC) properly connected to the processing/feeding machines of said hoppers (T1, T2, …, Tn) and suited to measure the quantity of material to be dehumidified drawn and/or delivered from/to each one of said hoppers (T1, T2, …, Tn);

- [**12**] at least one electronic control unit (U) connected to said generator (G) and to one or more of said valves (V) and to one or more of said sensors and/or devices (S) for measuring the flow rate of process fluid and to one or more of said devices (LC) for measuring the quantity of material to be dehumidified drawn and/or delivered from/to each hopper (T1, T2, …, Tn), wherein [**13**] said control unit (U) modulates the flow rate of process fluid flowing into one or more of said hoppers (T1, T2, …, Tn), according to said quantities of material to be dehumidified, drawn and/or delivered from/to the corresponding hopper (T1, T2, …, Tn), wherein [**14**] said electronic control unit (U) comprises one or more microprocessor boards, and/or one or more PCs or similar equipment, and/or one or more PLCs, connected to one or more actuators and/or sensors that measure said process parameters relative to each one of said hoppers (T1, T2, …, Tn) and, according to said process parameters, modulate the flow rate of process fluid introduced in each one of said hoppers (T1, T2, …, Tn);

characterised in that:

- [**15**] said process parameters that are measured or programmed are the following: temperature of the process fluid flowing in and out of each one of said hoppers and temperature of the plastic material drawn from each one of said hoppers and quantity and type of material contained in each one of said hoppers and dew point of said process fluid flowing in and out of each one of said hoppers;
- [**16**] said inlet ducts (D1) and said outlet ducts (D2) of each one of said hoppers (T1, T2, …, Tn) comprise on-off and adjusting valves (V) suited to allow or interrupt delivery or discharge of the process fluid;

- the system comprises [**17**] at least one sensor of the temperature of the plastic material drawn from each hopper (T1, T2, …, Tn), [**18**] at least one sensor of the temperature of the process fluid flowing into each hopper (T1, T2, …, Tn) and [**19**] at least one sensor of the temperature of the process fluid flowing out of each hopper (T1, T2, …, Tn), [**20**] in such a way as to determine the temperature variation between the process fluid flowing in and the process fluid flowing out of each hopper (T1, T2, …, Tn) in order to reduce energy consumption;
- [**21**] said control unit (U) adjusts the flow rate of said process fluid so that it is exactly proportional to the quantity of consumed material that is specific to each one of said hoppers (T1, T2, …, Tn), in order to minimise energy consumption;
- [**22**] said electronic control unit (U) controls said generator (G), said valves (V), said plurality of sensors/devices for measuring the flow rate (S) and said plurality of weighting devices (LC) relating to each hopper (T) implementing a self-regulating system that tends to reach several variable set point values of the process fluid flow rate that are exactly proportional to the quantities of plastic material consumed, in order to precisely adjust the flow rate of the process fluid flowing into each of said hoppers (T1, T2, …, Tn), [**23**] according to the quantity/flow rate of material drawn/delivered from/to each one of said hoppers and according to the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper (T), the temperature of the process fluid taken from the outlet ducts (D2) of each drying hopper (T), the temperature of the

plastic material taken from each hopper (T), the temperature of the plastic material conveyed into each hopper (T), the degree of humidity of the process fluid conveyed into the inlet ducts (D1) of each hopper (T) and the degree of humidity of the process fluid taken from the outlet ducts (D2) of each hopper (T) and to programmed and calculated values.

Claim 1 of auxiliary request 1 differs from claim 1 of the main request by the deletion of the expression "and to programmed and calculated values" at the end of feature 23.

Auxiliary request 2 was presented as "[t]he combination of claims 1 and 2 of the Main Request".

Auxiliary request 3 was presented as "[t]he combination of claims 1 and 2 of the First Auxiliary Request".

Claim 1 of auxiliary request 4 differs from claim 1 of the main request in that

- feature 15 has been amended to read "said process parameters that are measured or programmed are the following: temperature of the process fluid flowing in and/or out of each one of said hoppers and/or temperature of the plastic material drawn from each one of said hoppers and/or quantity and type of material contained in each one of said hoppers and/or dew point of said process fluid flowing in and/or out of each one of said hoppers", and
- features 22 and 23 have been replaced by the feature "said electronic control unit (U) adjusts, through said valves (V) the flow rate of the process fluid introduced in each one of said hoppers (T1, T2, … Tn) according to the values of

the following parameters relating to each one of said hoppers (T1, T2, … Tn): the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper (T), the temperature of the process fluid taken from the outlet ducts (D2) of each drying hopper (T) and the temperature of the plastic material taken from each hopper (T)."

Claim 1 of auxiliary request 5 differs from claim 1 of the main request in that

- feature 15 has been amended to read "said process parameters that are measured or programmed are the following: temperature of the process fluid flowing in and/or out of each one of said hoppers and/or temperature of the plastic material drawn from each one of said hoppers and/or quantity and type of material contained in each one of said hoppers and/or dew point of said process fluid flowing in and/or out of each one of said hoppers", and
- in feature 23 the words "the temperature of the plastic material taken from each hopper (T), the temperature of the plastic material conveyed into each hopper (T)" have been replaced by "the temperature of the plastic material conveyed into and/or taken from each hopper (T)" and the words "and to programmed and calculated values" have been deleted.

Claim 1 of auxiliary request 6 differs from claim 1 of the main request in that

- feature 15 has been amended to read "said process parameters that are measured or programmed are the following: temperature of the process fluid flowing in and/or out of each one of said hoppers and/or temperature of the plastic material drawn from each one of said hoppers and/or quantity and type of

material contained in each one of said hoppers and/ or dew point of said process fluid flowing in and/ or out of each one of said hoppers", and

- features 22 and 23 have been replaced by the feature "said electronic control unit (U) adjusts, through said valves (V), the flow rate of the process fluid introduced in each one of said hoppers (T1, T2, ..., Tn) according to the values of the following parameters relating to each one of said hoppers (T1, T2, ..., Tn); the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper (T), the temperature of the process fluid taken from the outlet ducts (D2) of each drying hopper (T) and the temperature of the plastic material taken from each hopper (T), the degree of humidity of the process fluid conveyed into the inlet ducts (D1) of each hopper (T)and the degree of humidity of the process fluid taken from the outlet ducts (D2) of each hopper (T)".

Claim 1 of auxiliary request 7 differs from claim 1 of the main request in that feature 15 has been amended to read "said process parameters that are measured or programmed are the following: temperature of the process fluid flowing in and/or out of each one of said hoppers and/or temperature of the plastic material drawn from each one of said hoppers and/or quantity and type of material contained in each one of said hoppers and/or dew point of said process fluid flowing in and/ or out of each one of said hoppers".

IX. The debate at the oral proceedings exclusively dealt with the question whether the respondent's various requests should be admitted into the appeal proceedings. The respondent submitted that the filing

of these requests constituted a reaction to the board's communication under Article 15(1) RPBA 2007.
The appellants essentially argued that these requests should not be admitted into the appeal proceedings because they were filed at a very late stage of the appeal proceedings without convincing justification and because they were apparently not clearly allowable. In support thereof, the appellants raised many objections in view of, for example, *reformatio in peius*, Rule 80 EPC, clarity and added subject-matter. As the issue of lack of clarity was a decisive factor for the board's discretionary decision not to admit the respondent's requests into the appeal proceedings, only the relevant parties' submissions in respect of this objection will be summed up in what follows:

(a) Appellants I and II

Feature 23 of claim 1 of the main request suffers from a *prima facie* lack of clarity that was introduced by the amendments. The reference to "the temperature of the process fluid conveyed into the inlet ducts ... of each drying hopper" is based on page 14 of the original application (paragraph [0049] of the patent). There, the temperature measured by sensor TF stands for the temperature of the process fluid conveyed into the ducts and/or taken from the ducts of each drying hopper, see also Fig. 1, where TF is determined upstream of the heating chambers R. It is not clear whether this temperature is the same as the temperature of the process fluid flowing into the hopper, possibly determined by means of another sensor.

(b) Respondent

Feature 23 refers to the parameters introduced in feature 15. Thus, the expressions "temperature of the process fluid conveyed into the inlet ducts" and "temperature of the process fluid flowing in ... of each of said hoppers" refer to the same temperature.

When informed by the board that none of the auxiliary requests 1 to 6 was admitted into the proceedings, the respondent declared that it reconsidered its position and adopted the view that there was a difference between the temperature of the process fluid conveyed into the ducts and the temperature of the process fluid flowing into the hopper. Claim 1 should be read accordingly. When read in the light of this interpretation, claim 1 is clear.

Reasons for the Decision

1. The present appeal proceedings are governed by the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020, OJ EPO 2019, A63) which entered into force on 1 January 2020 (Articles 24 and 25(1) RPBA 2020), except for Articles 12(4) to (6) and 13(2) RPBA 2020 instead of which Articles 12(4) and 13 of the Rules of Procedure of the Boards of Appeal in the version of 2007 (RPBA 2007, OJ EPO 2007, 536 and EPC 16th edition, June 2016, pages 601 to 629) remain applicable (Article 25(2) and (3) RPBA 2020).

2. Admission of the respondent's requests

2.1 In the present case, the summons to oral proceedings has been notified before the date of entry into force of RPBA 2020. Therefore, in accordance with Article 25(3) RPBA 2020, Article 13 RPBA 2007 applies instead of Article 13(2) RPBA 2020.

According to Article 13(1) RPBA 2007, any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the board's discretion. The discretion must be exercised in view of *inter alia* the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy. Furthermore, according to Article 13(3) RPBA 2007, amendments sought to be made after oral proceedings have been arranged may not be admitted if they raise issues which the board or the other party or parties cannot reasonably be expected to deal with without adjournment of the oral proceedings.

2.2 In the present case, all the respondent's present requests were filed after it had filed its reply to the appellants' statements of the grounds of appeal. Hence, these requests are amendments to the respondent's case within the meaning of Article 13(1) RPBA 2007. They may therefore be admitted and considered at the board's discretion. When exercising its discretion, the board must weigh up all the circumstances of the case. It is established jurisprudence of the boards of appeal (see Case Law of the Boards of Appeal, 9th edition, 2019, V.A.4.4.2a), that both the timing of the filing of the requests and the difficulty entailed in examining them are important criteria for deciding whether they can be admitted into the proceedings. In particular, the later

the requests are filed, the less likely they are to be held admissible. Also the more complex the new issues raised by amendments are, the greater the risk that the remaining time is insufficient to consider them properly. Therefore, according to established jurisprudence, amended claims should not introduce new objections under the EPC, i.e. it must be immediately apparent to the board, with little investigative effort on its part, that the amendments made successfully address the issue raised, without giving rise to new ones (see also Case Law of the Boards of Appeal, *supra*, V.A.4.12.1 and V.A.4.12.2 b)).

2.3 The respondent justified the late filing of the present requests as a reaction to the board's communication under Article 15(1) RPBA 2007.

The board, however, notes that in its communication it set out the issues to be discussed during the oral proceedings, provided a summary of the parties' submissions on these questions and gave a preliminary opinion without raising any new objections *ex officio*. In fact, in their statements stetting out the grounds of appeal the appellants *inter alia* put forward objections of added subject-matter and lack of clarity against feature 23 of claim 1 of the amended patent as maintained by the opposition division. In its communication, which was issued four months in advance of the oral proceedings, the board discusses the contested feature in the light of these objections. In view of this, the content of the communication does not contain any new objection or new issue. Therefore, it does not constitute a convincing justification for the respondent's substantial amendments of its case in the final phase of the appeal proceedings.

2.4 The appellants argued not only that the respondent had filed all requests at a very late stage of the appeal proceedings but also that feature 23 of claim 1 of the main request comprised a reference to "the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper", which introduced a new issue of lack of clarity.

In its decision G 3/14 (OJ EPO 2015, A102) the Enlarged Board of Appeal found that the claims of a patent as amended in opposition proceedings may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC.

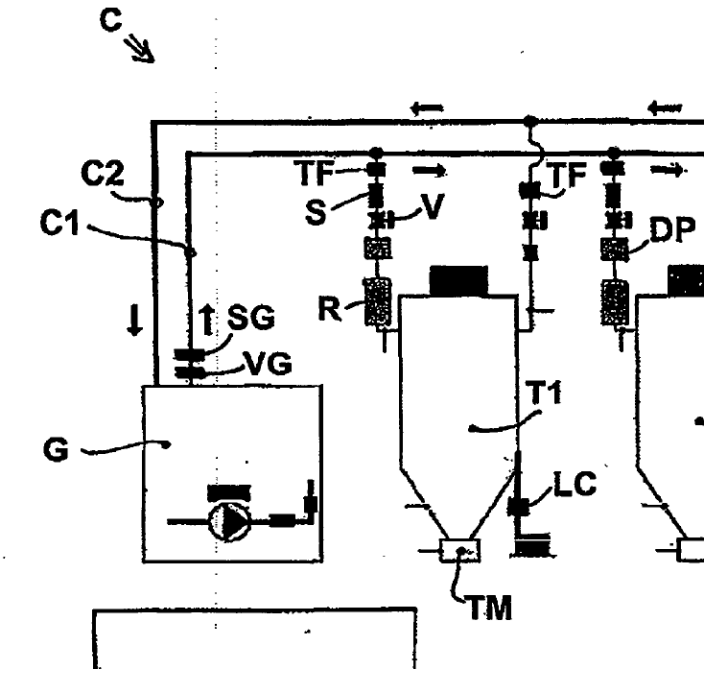
Feature 23 of claim 1 was not part of the claims as granted. Thus, the question of whether this feature raises new clarity issues under Article 84 EPC can be considered by the board.

2.5 Feature 23 of claim 1 of the main request comprises a reference to "the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper". It is not apparently clear from the wording of the claim whether this temperature refers to the "temperature of the process fluid flowing in ... each one of said hoppers" of feature 15 or to a different temperature that is measured when the process fluid enters the inlet ducts that convey the process fluid to the hopper. According to the respondent, the two temperatures of features 23 and 15 are the same. However, this assertion is not self-evident from the wording of the claim. Thus, claim 1 in itself lacks clarity.

2.6 Even in the light of the description of the patent it cannot be determined at first glance whether claim 1 is clear.

The respondent based the amendment on page 11, lines 14 to 18, and page 12, lines 2 to 10, of the original application (corresponding to paragraphs [0037] and [0041] of the patent). The first passage refers to the "temperature of the process fluid flowing in ... of each one of said hoppers", very much like feature 15 of claim 1.

The wording of feature 23, however, appears to have been taken from page 14, lines 17 to 19 of the application as filed, corresponding to paragraph [0049] of the patent, which belongs to the description of the embodiment of Fig. 1. This passage refers to "one or more temperature sensors (TF) for measuring the temperature of the process fluid conveyed into the ducts (D1) ... of each drying hopper (T)". These sensors are also shown in Fig. 1. It is clear from the drawing that this temperature is measured at the beginning of the duct leading to the hopper and that there may be several elements separating the sensor from the entry into the hopper, such as the flow rate sensor S, a valve V and, most importantly, heating chambers R:



Detail of Fig. 1 of the patent

The respondent's assertion that the temperature measured by sensor TF is the same as the temperature of the process fluid flowing into the hopper is, therefore, not backed up by the patent description.

2.7 In the light of the above, it is not apparent at first glance that there is a link between the temperatures of features 23 and 15 of claim 1. Therefore, these temperatures might refer to the same or different temperatures.

2.8 As a consequence, the question of the precise definition of the temperature referred to in feature 23 and its relation to the temperature mentioned in feature 15 remains unanswered. With this finding, the board concurs with the appellants that the amendment of feature 23 submitted by the respondent at the final stage of appeal proceedings gives rise to a new issue of lack of clarity.

The unclear reference to "the temperature of the process fluid conveyed into the inlet ducts (D1) of each drying hopper" is also present in claim 1 of each of the seven auxiliary requests. Thus, they share the fate of the main request, for the same reasons.

When informed by the board that none of the auxiliary requests 1 to 6 was admitted into the proceedings, the respondent declared that it reconsidered its position and adopted the view that there was a difference between the temperature of the process fluid conveyed into the ducts and the temperature of the process fluid flowing into the hopper, and that claim 1 should be read accordingly. However, this change of interpretation has no bearing on the clarity of claim 1. Rather, the very fact that the language of claim 1 in itself allows both interpretations demonstrates that the contested claim amendment entails a *prima facie* issue of lack of clarity.

2.9 As a consequence of the very late filing of all the respondent's requests on file and the new issue of lack of clarity affecting all these requests, the board, applying the established jurisprudence set out above in point 2.2, exercised its discretion under Article 13(1) RPBA 2007 and decided not to admit all the respondent's requests into the appeal proceedings.

3. Conclusion

As none of the respondent's requests on file is admitted into the appeal proceedings and consequently none of them can be allowed, the patent cannot be maintained as amended and must therefore be revoked under Article 101(3)(b) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

N. Schneider P. Lanz

Decision electronically authenticated