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**Datasheet for the decision
of 7 February 2024**

Case Number: T 0977/22 - 3.3.05

Application Number: 12725175.9

Publication Number: 2702179

IPC: C22B9/10

Language of the proceedings: EN

Title of invention:

GAS AND PARTICULATE DELIVERY SYSTEM AND METHOD FOR
METALLURGICAL VESSEL

Patent Proprietor:

Berry Metal Company

Opponent:

SMS group GmbH

Headword:

Lance for metallurgical vessel/Berry Metal

Relevant legal provisions:

EPC Art. 123(2)

RPBA 2020 Art. 13(2)

Keyword:

Amendments - extension beyond the content of the application
as filed (yes)

Amendment after summons - exceptional circumstances (no)

Decisions cited:

T 0451/20, T 1080/20, T 0084/19

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
Fax +49 (0)89 2399-4465

Case Number: T 0977/22 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 7 February 2024

Appellant: SMS group GmbH
(Opponent) Eduard-Schloemann-Strasse 4
40237 Düsseldorf (DE)

Representative: Hemmerich & Kollegen
Hammerstraße 2
57072 Siegen (DE)

Respondent: Berry Metal Company
(Patent Proprietor) 2408 Evans City Road
Harmony, PA 16037 (US)

Representative: Forresters IP LLP
Skygarden
Erika-Mann-Straße 11
80636 München (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
10 February 2022 concerning maintenance of the
European Patent No. 2702179 in amended form.**

Composition of the Board:

Chairman E. Bendl
Members: S. Besselmann
S. Fernández de Córdoba

Summary of Facts and Submissions

- I. The opponent's (appellant's) appeal in the present case is against the opposition division's interlocutory decision according to which European patent EP 2 702 179 B1 in amended form on the basis of the then auxiliary request 2 met the requirements of the EPC.
- II. The patent proprietor (respondent) defended the claims allowed by the opposition division as their main request. They filed an auxiliary request with the letter of 13 December 2023.
- III. The patent in suit concerns a gas and particulate delivery system and a method for charging a metallurgical vessel.
- IV. The independent claims of the main request relate to a method (claim 1) and an apparatus (claim 7), and read as follows:

"1. A method for charging a particulate (14) to a metallurgical vessel through a lance system (10), the method comprising:

injecting through the lance system a carrier gas (18) at low pressure such that the gas enters the metallurgical vessel;

feeding particulate to the low pressure carrier gas such that the gas carries the particulate into the metallurgical vessel;

stopping the feeding of the particulate; and

purging the lance system with the carrier gas (18) at high pressure,

characterised in that the low pressure carrier gas and the high pressure carrier gas are provided by a dual pressure regulated gas supply."

"7. An apparatus for charging a particulate to a metallurgical vessel through a lance system (10) comprising:

a metallurgical lance having a inner barrel (28) communicating with a tip of the lance and a header of the lance;

an outer tube (22) having a first end in open communication with the inner barrel at the header and a second end sealed on the outside of a particulate inlet tube (12);

the particulate inlet tube extending a first portion co-axially within the outer tube from the outer tube second end, and a second portion extending outside the outer tube;

the second portion of the particulate inlet tube having a shut-off valve (16);

an auxiliary gas tube (20) having a first end in open communication with the outer tube, wherein the open communication is positioned between the outer tube second sealed end and adjacent to the particulate inlet tube first portion, and the second end of the auxiliary gas tube in communication with at least one pressure regulating valve (60),

and characterised by a dual pressure regulated gas supply for providing a carrier gas (18) at low pressure to carry particulate into the vessel and providing the carrier gas (18) at high pressure for purging the lance system."

V. The independent claims of the auxiliary request differ from those of the main request as follows:

The following phrase has been added at the end of claim 1:

" , wherein the low pressure carrier gas (18) is regulated by first (60) and second (66) regulating valves; and the high pressure carrier gas (18) is regulated by the first regulating valve (60) and a by-pass valve (62)."

The following phrase has been added at the end of the independent apparatus claim, which is now claim 4:

" , wherein the at least one pressure regulating valve (60) further comprises a high pressure regulating valve (60), a low pressure regulating valve (66) downstream of the high pressure regulating valve, and a by-pass valve (62) to by-pass the low pressure regulating valve."

VI. The appellant's essential arguments, where relevant to the present decision, can be summarised as follows.

Independent claims 1 and 7 of the main request infringed Article 123(2) EPC because they referred to a dual pressure regulated supply without mentioning the three valves 60, 62, 66. This constituted an inadmissible intermediate generalisation.

The auxiliary request was late-filed and should not be admitted into the proceedings. It did not meet the requirements of Article 123(2) EPC. If the auxiliary request was - nevertheless - admitted, the case should be remitted to the opposition division.

VII. The respondent's essential arguments, where relevant to the present decision, can be summarised as follows.

The main request met the requirements of Article 123(2) EPC. The dual pressure regulated gas supply was the essence of the invention. The presence of the three valves 60, 62 and 66 as shown in Figure 2 was merely a preferred embodiment thereof. There was no intermediate generalisation.

The auxiliary request should be admitted into the proceedings. There had been no need to file it earlier. The auxiliary request was merely a limitation on the basis of a dependent claim in respect of which no objection had been raised. It clearly overcame the Article 123(2) EPC objection. Exceptional circumstances were present. There was no need for a remittal.

VIII. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed and that the patent be maintained on the basis of the claims filed as auxiliary request 2 on 18 November 2021 (main request) and, alternatively, on the basis of the auxiliary request filed on 13 December 2023.

Reasons for the Decision

Main request

1. Article 123(2) EPC

1.1 The objection concerns the features in the characterising portions of claims 1 and 7. These

features ("*characterised in that the low pressure carrier gas and the high pressure carrier gas are provided by a dual pressure regulated gas supply*" in claim 1; "*a dual pressure regulated gas supply for providing a carrier gas (18) at low pressure to carry particulate into the vessel and providing the carrier gas (18) at high pressure for purging the lance system*" in claim 7) were not present in any of the claims as originally filed and were inserted during the examination proceedings.

- 1.2 According to the appellant, the feature specifying a "*dual pressure regulated gas supply*" was disclosed in the application as originally filed exclusively in conjunction with an embodiment including a first pressure regulating valve 60, a by-pass valve 62 and a second pressure regulating valve 66, as depicted in Figure 2 and described in paragraphs [0008], [0013] and [0029] of the application as originally filed. In the appellant's opinion, method claim 1 and apparatus claim 7 - which did not mention these three valves - thus constituted an inadmissible intermediate generalisation.
- 1.3 According to the respondent, this was not correct. The first two lines on page 3 (paragraph [0008]) explained that "*[t]he dual pressure regulator allows for higher pressure during purge and lower pressure during particulate injection*". There was no limitation on how the dual pressure regulation was to be achieved. That was also clear from paragraph [0009], according to which the three valves 60, 62 and 66 were merely preferred features.

The respondent also relied on paragraph [0033]. According to the respondent, it could be derived from

that paragraph that a dual pressure regulated gas supply was the essence of the invention, the "*dual pressure regulator*" constituting the means for increasing *the* pressure of *the* (same) carrier gas, i.e. for carrying out the step mentioned at the end of paragraph [0033]. The presence of the three valves was merely described in the context of a preferred embodiment of the method in paragraph [0033], as was clear from paragraph [0035].

The respondent also cited paragraph [0044] as a disclosure of a dual pressure regulated gas supply that did not refer to Figure 2, and saw this as a pointer to embodiments in which a dual pressure regulated gas supply was present but in which the three valves 60, 62 and 66 were not needed.

- 1.4 However, the respondent's arguments are not convincing.
- 1.4.1 Paragraph [0008] of the application as originally filed provides some explanation and a description of Figures 1 and 2. It does not amount to an overriding definition of the claimed invention in general terms, because it recites neither the combination of features of independent claim 1 nor, in particular, the combination of features of independent claim 7. Instead, details are mentioned that are not specified in the independent claims (e.g. an intermediate, co-axial barrel; an exterior barrel). A general description of a first and a second aspect of the invention, paralleling the independent claims, is only provided in the subsequent paragraphs ([0009] and [0010]).
- 1.4.2 The application as originally filed introduces the expression "*dual pressure regulated supply*" in paragraph [0008] on page 2 (ninth and tenth lines of

the paragraph), where it is indicated that "*Figure 2 illustrates a dual pressure regulated supply for the carrier gas*". Figure 2 shows the presence of a first pressure regulating valve 60, a by-pass valve 62 and a second pressure regulating valve 66. It is thus clear that the subsequent mention of "[t]he *dual pressure regulator*" in the context of this paragraph (the first two lines on page 3 mentioned by the respondent), introduced by the definite article "[t]he", refers back to the dual pressure regulator illustrated in Figure 2. Said first two lines on page 3 explain the function of this specific dual pressure regulator having the three valves 60, 62 and 66, which is to allow "*for higher pressure during purge and lower pressure during particulate injection*". The terms "*dual pressure regulated supply*" and "*dual pressure regulator*" are used synonymously.

In the context of paragraph [0008] as a whole, the two lines mentioned by the respondent cannot be seen as a self-contained definition or a general description of a dual pressure regulated supply. Furthermore it cannot be derived from this paragraph that an unspecified dual pressure regulator was a feature of the invention in general.

- 1.4.3 The general definition of the invention in the application as originally filed involves, in one step, injecting a low-pressure carrier gas and, in another step, purging with a high-pressure carrier gas. In claim 1 as originally filed, there is no restriction as regards the means used for providing or regulating the low and high pressures. It follows from paragraph [0009] that embodiments in which "*the method has a low pressure carrier gas regulated by first and second regulating valves; and a high pressure carrier gas*

regulated by the first regulating valve and a by-pass valve" are preferred embodiments, which means that these are preferred embodiments of the originally disclosed invention. This also follows from the disclosure in paragraph [0035], in which a preferred embodiment of the method is described and in which the three valves (first pressure regulating valve 60, by-pass valve 62, second pressure regulating valve 66) are mentioned. In addition, it can be taken from dependent method claim 4 and dependent apparatus claim 11 of the application as originally filed that an embodiment involving these three valves is a preferred embodiment of the overall invention, an alternative preferred embodiment having a single pressure regulating valve (dependent claims 5 and 10).

However, it is not stated at any point that the three valves were only a particular embodiment of a "*dual pressure regulated gas supply*" and that the dual pressure regulator could have a different configuration - and could, for instance, be a single pressure regulating valve.

- 1.4.4 A general definition or use of the term "*dual pressure regulated gas supply*" in the sense of a (any) means to increase *the* pressure of *the* (same) carrier gas cannot be derived from paragraph [0033] either. Indeed, said paragraph does not mention a "*dual pressure regulated gas supply*".

As indicated, the fact that an embodiment involving the three valves (first pressure regulating valve 60, by-pass valve 62, second pressure regulating valve 66) is described as a preferred embodiment of the method (paragraph [0035]) is to be seen in the context of the general disclosure of the invention. This does not

change the understanding of paragraph [0033] and does not provide support for an *unspecified* dual pressure regulated supply.

- 1.4.5 Furthermore, paragraph [0031], which does mention a dual pressure regulated carrier gas supply 18, specifically refers to "*[t]he dual pressure created by the carrier gas passing as high pressure through bypass valve 62 or as low pressure through the second pressure regulating valve 66*", thus linking it to the presence of the three valves. Paragraph [0013] also refers specifically to the dual pressure regulated gas supply shown in Figure 2. Paragraph [0029] provides a further description of Figure 2 and mentions the three valves.
- 1.4.6 Paragraph [0044] states that "*[i]n use, the system has a dual pressure regulated oxygen supply to the Lime Pipe (inner wear barrel 28 of a particulate injection lance) allowing for lower pressure (30 PSI) to be used during Lime Injection sequences, and a higher pressure (150 PSI) to be used to purge the wear barrel 28 when the Lime Injection sequence is not running.*" It is not clear to which system reference is being made here. It is, however, clear that it is a particular embodiment because it specifically relates to lime injection using oxygen. The pressures mentioned are the same as those specified in relation to Figure 2 (paragraph [0029]). In so far as the system is to be understood as the system shown in the figures, the only pressure regulation depicted in the figures is the one in Figure 2 (which is shown as skid 56 in Figure 3). Moreover, the subsequent paragraph [0045] describes where pressure-regulating valves 60 and 66 can be mounted, but does not state that these are optional. Only the last sentence in paragraph [0045] states that

"[o]xygen pressure can either be regulated by two pressure regulators/pressure regulating valves 60 and 66 (one low pressure and one high pressure) and a bypass valve 62 to determine which pressure is used, or by a single modulating pressure regulating valve."

Although this sentence thus describes alternative means for pressure regulation, it does not imply that using a single modulating pressure regulating valve is an embodiment of a dual pressure regulator. In the context of the application as a whole, this sentence is instead to be understood as describing an alternative to the dual pressure regulated oxygen supply. This applies all the more so as it is not self-explanatory how a single pressure regulating valve could constitute a "dual pressure regulator". A single modulating pressure regulating valve would provide a range of pressures instead. The set-up in Figure 2, by contrast, provides pressure regulation at two different pressure levels, namely high and low, using either the first pressure valve with the by-pass open, or the first and second pressure regulating valves, and allows switching between the two pressure levels.

In any case, paragraph [0044] neither discloses nor points to the functional feature of an - otherwise unspecified - dual pressure regulated gas supply as a feature of the invention in general.

1.5 In summary, it cannot be derived directly and unambiguously from the application as originally filed that an unspecified dual pressure regulated gas supply was a feature of the invention as generally described, and as defined in claims 1 and 7 under consideration.

1.6 The requirements of Article 123(2) EPC are thus not met.

Auxiliary request

2. Article 13(2) RPBA 2020

2.1 The auxiliary request was filed after notification of summons to oral proceedings and issue of the communication pursuant to Article 15(1) RPBA 2020. The view that the auxiliary request constituted an amendment to the respondent's case and was subject to the provisions of Article 13(2) RPBA 2020 was not contested. These provisions state that such an amendment 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 According to the respondent, exceptional circumstances had to be seen in that the reply to the board's preliminary opinion was the first opportunity or reason to address the objection with amendment. Since the opposition division had not accepted the opponent's view in its preliminary opinion or in the oral proceedings, there had been no need to file an auxiliary request addressing this. The respondent argued that they had been surprised by the board's preliminary opinion.

Further according to the respondent, exceptional circumstances were present because the amendment was only a combination of granted claims, inserting a dependent claim that had never been attacked. This could not be seen as being unfair to the other party because the dependent claim had always been on the table.

Taking the auxiliary request into account was also in line with recent case law. In this respect, the respondent referred to T 451/20 (Reasons 17), T 1080/20 (Reasons 3.2) and T 84/19 (Reasons 29).

The respondent was also of the opinion that the request clearly overcame the issue raised and was *prima facie* allowable. The amendment inserted the feature that had been deemed to be missing in the independent claims, i.e. the feature relating to the three valves 60, 62 and 66. According to the respondent, it was not, therefore, detrimental to procedural economy.

- 2.3 The respondent's arguments do not demonstrate the presence of exceptional circumstances that justify the auxiliary request being taken into account.

The objection under Article 123(2) EPC had already been raised in the notice of opposition but was not found convincing by the opposition division. The appellant renewed this objection in their statement of grounds of appeal (III.3.1). It is therefore incorrect that the respondent did not have an earlier opportunity to address this objection by amendment. In contrast, the respondent could and should have addressed this objection by amendment at the latest in reply to the statement of grounds of appeal. It was the respondent's choice to instead only provide counter-arguments in the reply (page 1 "Dual pressure regulated gas supply" - page 3).

No exceptional circumstances can be seen in that the board agreed with the appellant's objection and diverged from the contested decision (Case Law of the

Boards of Appeal of the EPO, 10th edn., 2022, V.A. 4.5.6h).

It is not the case that the auxiliary request had been limited on the basis of a dependent claim that had never been attacked during the opposition proceedings (see item VI, points 6.3 and 6.8, of the notice of opposition). The mere fact that the amendment was based on a granted claim is insufficient to justify exceptional circumstances. T 451/20 does not lead to a different conclusion. Indeed, T 451/20 concerned a case involving the reverse situation, i.e. in which an amendment under consideration was *not* limited to the mere deletion of claims or to the incorporation of subject-matter of a dependent claim, and in which this was considered a *further* reason for holding that admitting the amendment would *not* contribute to procedural economy (Reasons 17, emphasis added).

Finally, it is incorrect that the auxiliary request would clearly overcome the objection on a *prima facie* basis without giving rise to new issues and would thus not be detrimental to procedural economy. The appellant argued that the inserted feature did not provide a further definition of the contested feature "dual pressure regulated gas supply", but specified additional valves that were not part of the dual pressure regulated gas supply. There would thus be a need for discussion on the issue of whether the objection under Article 123(2) EPC was successfully overcome, in particular with regard to the apparatus claim. Although the appellant had not raised any objection under Article 123(2) EPC against the dependent claims of the main request and thus had no additional objections against them, this cannot be seen

as an acknowledgement that they overcame the objection raised against the independent claims.

T 84/19, cited by the respondent, is not comparable to this case. T 84/19 related to a case where a board applied its discretionary power under Article 12(4) RPBA 2007 and admitted an auxiliary request into the proceedings (Reasons 26-28). Point 29 of the reasons, on which the respondent relied and in which it was found that no ground of opposition had been raised, relates to the substance of the request.

T 1080/20 is not comparable to this case either, because it related to the exercise of a board's discretion under Article 12(4) RPBA 2020 (Reasons 3.2).

2.4 For these reasons, the auxiliary request was not to be taken into account.

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:



C. Vodz

E. Bendl

Decision electronically authenticated