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**Datasheet for the decision  
of 11 October 2019**

**Case Number:** T 0838/16 - 3.2.03

**Application Number:** 09011733.4

**Publication Number:** 2119982

**IPC:** F25B13/00, F25B40/00

**Language of the proceedings:** EN

**Title of invention:**

Refrigeration/air conditioning equipment

**Applicant:**

Mitsubishi Electric Corporation

**Headword:**

**Relevant legal provisions:**

EPC Art. 76(1)

**Keyword:**

Divisional application - subject-matter extends beyond content of earlier application (yes)

**Decisions cited:**

G 0002/10, T 1852/13, T 0755/12

**Catchword:**



**Beschwerdekammern**  
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Case Number: T 0838/16 - 3.2.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.03**  
**of 11 October 2019**

**Appellant:** Mitsubishi Electric Corporation  
(Applicant) 7-3, Marunouchi 2-chome  
Chiyoda-ku  
Tokyo, 100-8310 (JP)

**Representative:** Pfenning, Meinig & Partner mbB  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 8 December 2015  
refusing European patent application No.  
09011733.4 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** G. Ashley  
**Members:** C. Donnelly  
E. Kossonakou

## **Summary of Facts and Submissions**

- I. The appeal lies from the decision of the examining division to refuse European patent application no. 09849210.1. The refused application is a divisional application of the earlier European patent application no. 05022444.3

In its decision the examining division held that the subject-matter of claim 1 according to the sole request did not meet the requirements of Article 76(1) EPC since the feature:

"heat source for heating a refrigerant, disposed between the second internal heat exchanger and the compressor"

specified in claim 1 of the parent application (EP 05022444.3) as originally filed was not comprised in claim 1 of the divisional application.

- II. The applicant (hereinafter: the "appellant") lodged an appeal against this decision.
- III. With the summons to oral proceedings, the board sent a communication pursuant to Articles 15(1) and 17(2) of the Rules of Procedure of the Boards of Appeal (RPBA) indicating to the appellant its preliminary, non-binding opinion of the case. In particular, the board indicated that it would apply the "gold" standard (as referred to in G2/10 with reference to G3/89 and G11/91) when assessing whether the requirements of Article 76(1) EPC were met.

IV. By letter of 26 September 2019, the appellant presented further arguments in response to the board's provisional opinion.

V. Oral proceedings took place on 11 October 2019. At the end of the debate, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of its sole request underlying the contested decision.

VI. *Appellant's submissions*

The appellant's submissions can be summarised as follows.

Figure 2 shows a vapour-compression cycle in which the heat source 17 plays no role. The passage at column 6, lines 47 to 49 states that:

"The heat source 17 for heating a refrigerant can adjust the amount of heat when necessary".

This sentence taken alone directly and unambiguously discloses at least that the heat source 17 is not necessarily operated. A person skilled in the art would directly and unambiguously understand that they could omit the heat source 17 if/when adjusting the amount of heat is not necessary.

Figure 9 also clearly shows a realisation of the invention without the heater 17. The passage at column 4, lines 5 to 8 of the published parent application, states that:

"Figure 9 is a diagram showing the operation characteristics of the refrigeration/air conditioning

equipment according to Embodiment 1 of the present invention with or without a first internal heat exchanger".

Thus, both versions with and without the first internal heat exchanger are considered as variants of embodiment 1 of the present invention. It follows that all three lines of Fig. 9 are meant to be embodiments of the invention. Therefore, the full line is unambiguously an embodiment of the invention where the heater is not used. A person skilled in the art would directly and unambiguously understand that a heater which is not used at all may as well be omitted.

Similarly, figure 12 also shows the defrosting characteristics of an embodiment in which the heat source is omitted.

Paragraph [0052] reads:

"When further increase in the heating capacity is desired, a heat source 17 for heating a refrigerant, such as an electric heater, is provided in the injection circuit 13. The heat source can suppress the decrease in the discharge temperature of the compressor 3 and increase the injection flow rate. The heat source 17 can also increase the peak value of the heating capacity, as shown in Fig. 9."

This passage implies that the heat source is not provided when further increase in the heating capacity is not desired. Thus, whether the heat source 17 is provided depends on whether further increase in the heating capacity is desired. Since the existence of the heat source depends on the desire of the skilled person putting the invention into practice, it is directly and

unambiguously disclosed that the heat source 17 is not always provided but optional and is thus not essential.

Furthermore, if a feature is considered necessary, it will have to be provided always. However, it is very clear from paragraph [0052] that the heat source 17 is not always provided. It is therefore not necessary and must therefore be optional.

Also, it is stated in paragraph [0052] that "the heat source can suppress the decrease in the discharged temperature" and that the heat source 17 can also increase the peak value of the heating capacity". This is an optional wording as it is not said that the "heat source 17 suppresses the decrease in the discharged temperature" and it is not said that "the heat source 17 increases the peak value of the heating capacity".

## **Reasons for the Decision**

### *1. Contested decision*

In reaching its decision the examining division held that the deletion of this feature met none of the criteria specified in the Guidelines H-V.3.1 (often referred to as the "essentiality test") according to which the removal of a feature from a claim is only allowable if the skilled person would directly and unambiguously recognise that:

(i) the feature was not explained as essential in the disclosure;

(ii) the feature is not indispensable for the function of the invention in the light of the technical problem the invention serves to solve; and  
(iii) the replacement or removal requires no real modification of other features to compensate for the change.

2. *"Essentiality test" - Case law of the boards of appeal*

The criteria used by the examining division can be useful in assessing whether the requirements of Article 123(2) EPC are met when a feature is removed from or replaced in a claim. However, as set out in the "Case Law of the Boards of Appeal" 8th Edition 2016, Chapter II.E.1.2.4 and also in the latest edition of the Guidelines for examination (November 2018 see H-V-3.1) themselves, it is the requirements of the "gold" standard (as referred to in G2/10 with reference to G3/89 and G11/91 - see reasons 4.3), which ultimately must be met when assessing **any** amendment for its compliance with Article 123(2) EPC, and by analogy with Article 76(1) EPC (see also for example T1852/13, T0755/12). This requires that **any** amendment to the parts of a European patent application relating to the disclosure (the description, claims and drawings), irrespective of the context of the amendment made, can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, and seen objectively relative to the date of filing, from the whole of these documents as filed.

Thus, in the present case, the question to be answered is not any of those above cited in relation to the essentiality test, or whether the skilled person would regard it as obvious to omit the heat source from an



embodiment, but rather whether there is a direct and unambiguous disclosure in the originally filed parent application of an embodiment according to claim 1 of the divisional application in which the heat source 17 is actually omitted.

3. *Fulfillment of the requirements of Article 76(1) EPC*

3.1 Figure 1 of the parent application is the sole figure showing the refrigerant circuit diagram of the various components making up the refrigeration/air conditioning equipment of Embodiment 1 of the invention. The heat source 17 is shown in this diagram and is listed as one of the components at column 4, line 38 of the description. The purpose of the heat source 17 in the refrigerant circuit is defined at column 4, lines 43 to 44 as being to heat a refrigerant circulating through the injection circuit 13.

3.2 Since figure 1 is the only illustration of the fundamental refrigerant circuit diagram underlying the invention of the parent application, the skilled person would assume that any deviation from this layout would be clearly indicated in the description.

3.3 Figure 2 of the parent application is the PH (pressure-enthalpy) diagram showing the heating operation of the equipment according to figure 1. With reference to figure 2, the description of the parent application at column 6, lines 37 to 41, explicitly indicates that the low temperature two-phase refrigerant is heated both by exchanging heat with the high-pressure refrigerant in the second internal heat exchanger 10 and by the heat source 17 in order to arrive at point 10 on the diagram of figure 2.

3.4 The appellant has argued that in view of the passage at column 6, lines 47 to 49 which states that:

"The heat source 17 for heating a refrigerant can adjust the amount of heat when necessary"

a person skilled in the art would directly and unambiguously understand that they could omit the heat source 17 if/when adjusting the amount of heat is not necessary.

3.5 However, although the skilled person might see it as obvious that the heat source could be omitted, this is not the same as a disclosure that it **is** actually omitted. Therefore, figure 2 does not fulfil the requirements of a direct and unambiguous disclosure that the heat source is omitted.

3.6 The appellant also submitted that the text of paragraph [0052] (corresponding to page 29, lines 3 to 9 of the originally filed parent application) relating to figure 9, which states:

"When further increase in the heating capacity is desired, a heat source 17 for heating a refrigerant, such as an electric heater, is provided in the injection circuit 13. The heat source 17 can suppress the decrease in the discharge temperature of the compressor 3 and increase the injection flow rate. The heat source 17 can also increase the peak value of the heating capacity, as shown in Fig. 9."

supports its case that the heat source is not provided when further increase in the heating capacity is not desired.

- 3.7 However, the board does not agree with this viewpoint since the first sentence could also mean that the heat source is always provided, but only operated when a further increase in the heating capacity is desired. Since there are two possible interpretations the disclosure is ambiguous.
- 3.8 Similarly the specification in paragraph [0052] that "the heat source can suppress the decrease in the discharged temperature" and that the heat source 17 can also increase the peak value of the heating capacity" is a description of what a heat source which is always present can do when it is operated.
- 3.9 Figure 9 itself shows a comparison between the modes of operation according to the invention of the parent application, i.e. a first mode (i) where there is heat exchange in the first internal heat exchanger and use of a heat source for heating refrigerant (dashed line), with two other possible modes of operation, namely: (ii) without first internal heat exchanger (chain-line); and (iii) heat exchange in first internal heat exchanger (full line). However, this is also not an unambiguous disclosure that the heat source is not provided in the refrigerant circuit of mode (iii) since it also applies to situations where the heat source is present but simply not operated. Similar considerations apply to figure 12.
- 3.10 Therefore, figures 9 and 12 also do not fulfil the requirements of a direct and unambiguous disclosure for the omission of the heat source 17 from the refrigerant circuit.
- 3.11 Consequently, the board agrees with the examining division that the skilled person would understand from

the parent application that the heat source 17 is always provided and only switched on when further heating is required.

3.12 In conclusion, the requirements of Article 76(1) EPC are not met since there is no direct and unambiguous disclosure in the parent application of an embodiment in which the heat source 17 is omitted.

## Order

### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated