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Datasheet for the decision of 24 May 2016

Case Number: T 0277/12 - 3.2.04

Application Number: 03739569.6

Publication Number: 1474205

IPC: A62B7/14

Language of the proceedings: EN

Title of invention:
METHOD OF OPERATING A LIFE SUPPORT SYSTEM FOR AN AIRCRAFT

Patent Proprietor:
Honeywell Normalair-Garrett (Holdings) Limited

Opponent:
L'AIR LIQUIDE, S.A.
pour l'étude et l'exploitation
des procédés Georges Claude

Headword:

Relevant legal provisions:
EPC Art. 54

Keyword:
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Catchword:

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Case Number: T 0277/12 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 24 May 2016

Appellant: (Patent Proprietor)	Honeywell Normalair-Garrett (Holdings) Limited Yeovil, Somerset BA20 2YD (GB)
Representative:	Ashton, Timothy Forresters Skygarden Erika-Mann-Strasse 11 80636 München (DE)
Respondent: (Opponent)	L'AIR LIQUIDE, S.A. pour l'étude et l'exploitation des procédés Georges Claude 75 quai d'Orsay F-75321 Paris (FR)
Representative:	De Cuenca, Emmanuel Jaime L'Air Liquide S.A. Direction Propriété Intellectuelle 75 Quai d'Orsay 75321 Paris Cedex 07 (FR)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 20 December 2011 concerning maintenance of the European Patent No. 1474205 in amended form.**

Composition of the Board:

Chairman	A. de Vries
Members:	J. Wright
	C. Heath

Summary of Facts and Submissions

I. The appellant (proprietor) lodged an appeal, received 9 February 2012, against the interlocutory decision of the opposition division of 20 December 2011 on the amended form in which European patent no. EP-B-1474205 can be maintained. The appeal fee was paid at the same time. The statement setting out the grounds was received on 20 April 2012.

II. The opposition was filed against the patent as a whole and based inter alia on Article 100(a) together with Articles 52(1) and 54(1) and (3) EPC for lack of novelty.

The opposition division held, inter alia, that the opposition ground of lack of novelty, Article 100(a) with Articles 52(1) and 54(3) EPC, raised against claim 1 prejudiced maintenance of the patent as granted, having regard to the following document:
D2: WO02/081306A.

III. In a communication from the Board of 23 February 2016, in preparation for oral proceedings, the board expressed its provisional opinion regarding, inter alia, novelty of granted claim 1 vis-à-vis D2.

Oral proceedings were duly held before the Board on 24 May 2016 in the absence of the parties, both of which had been duly summoned and both of which informed the Board by letter that they would not attend the oral proceedings (respondent, letter of 5 April 2016;,appellant letter of 31 March 2016).

IV. The appellant requests that the decision under appeal be set aside and the patent maintained as granted.

V. The respondent has not submitted any requests.

VI. The independent claim 1 of the patent as granted reads as follows:

"A life support system for an aircraft, including a first oxygen supply apparatus operable to provide a limited supply of first product gas being one of pure oxygen and oxygen-enriched gas, to a breathing gas supply apparatus, and a second oxygen supply apparatus operable to provide a durable supply of second product gas which is an oxygen-enriched gas containing a lower concentration of oxygen than that in the first product gas to the breathing gas supply apparatus, wherein the second product gas is supplied at a pressure which is higher than that at which the first product gas is supplied to the breathing gas supply apparatus".

VII. The appellant argued as follows:

Novelty of granted claim 1
The subject matter of claim 1 is novel vis-à-vis D2. D2 discloses a life support system for an aircraft having an oxygen supply operable to supply a limited supply of a first product gas, namely from oxygen cylinders, and a durable supply of a second product gas, namely oxygen enriched gas.

The general does not disclose the specific, so the pressure ranges disclosed in D2 cannot be considered disclosures of individual specific pressures within the range disclosed. Therefore the system of D2 is not disclosed to be operable to provide gas from the gas supply sources with the pressure relationship claimed.

Even if the system of D2 did disclose that the regulator/expander in D2 could reduce the pressure from the first gas supply below 2.5 Bar or below 1.5 Bar, which is not stated, the subject matter of claim 1 would still be new because this would not prove that the pressure from the second gas supply was always higher than that of the first gas supply as claim 1 requires.

The appellant did not comment on the Board's preliminary opinion.

VIII. The respondent submitted no arguments.

Reasons for the Decision

1. The appeal is admissible.

2. Background

The invention relates, inter alia, to a life support system for an aircraft. Aircraft flying at high altitudes are provided with an emergency oxygen supply for distributing breathing gas to passengers via oxygen masks (see patent specification, paragraphs [0001] and [0002]). Such a supply can be a limited supply, for example bottles of compressed gas (specification, paragraph [0003]) or a durable supply, such as a molecular sieve oxygen generating system, MSOG (specification, paragraph [0005]). It is also known to provide a combination of the two supplies in a single system (specification, paragraphs [0006] and [0007]).

3. Novelty of granted claim 1, vis-à-vis D2

In its communication in preparation for the oral proceedings the board gave a preliminary opinion regarding this issue. In particular it stated the following:

"1.1 Novelty vis-a-vis D2

The division found the subject matter of claim 1 to lack novelty with respect to D2.

It appears to be common ground that D2 discloses a life support system for an aircraft that combines a first oxygen supply for providing a limited supply of pure oxygen gas (page 4, line 33) to a breathing gas supply apparatus and a second durable oxygen-enriched gas product supply apparatus (i.e. lower oxygen concentration, page 4, lines 13 to 16) .

The appellant disputes the appealed decision's finding regarding the last claim feature, "product gas supplied at a pressure higher than that at which the first product is supplied". The decision held that the life support system of D2 was operable in this manner.

D2 does mention some supply pressures. The first product is supplied at a pressure less than 3 bars (sentence bridging pages 4 and 5). The statement defines a range of pressures below 3 bars and with a theoretical 0 bar lower limit. The second product is supplied at between 1.5 and 2.5 bars (page 4, lines 13 to 16).

In accordance with established case law, the generic cannot take away the novelty of the specific. The disclosure of a range of values discloses the end points, but normally not each intermediate specific

value in the range. Thus, in the present case, the range "below 3 bar" is not a disclosure of, for example, specific pressure values below 2.5 bar, the upper limit of supply pressure for the second gas. Thus the Board is of the opinion that there is no direct and unambiguous disclosure of supplying the second product at say 2.5 bar whilst supplying the first product at say 2.4 bar. Even considering the statement of supplying the first gas at less than three bars to define a range including a theoretical lower limit of 0 bars, which is lower than both the upper and lower end points of the pressure range for supplying the second gas (1.5 to 2.5 bar), the Board considers that the skilled person would not read this as a pressure at which the first gas could be supplied. Thus, in the Board's opinion, none of the possible combinations of specific pressures disclosed in D2 conform to the pressure relationship claimed for supplying gas products. Nor does the Board consider that D2 discloses any such relative pressure relationship in generic terms. Lastly both gasses pass through a pressure regulator 24 before being supplied to users (page 5, lines 8 and 9). D2 is silent as to how pressure is regulated for the two product gasses. Thus the Board agrees with the appellant that D2 does not directly and unambiguously disclose that product gas is supplied at a pressure higher than that at which the first product is supplied. This feature pertains to the use or operation of the claimed life support system. Though it is true that a claim to a system (or device) can validly include a use (or method) feature, it will nonetheless need to be discussed whether and to what extent such a feature represents a clear delimitation of the claimed system (or device) in particular with the aim of establishing novelty over the prior art".

3.1 As is apparent from the above, in the Board's preliminary opinion the question of novelty vis-à-vis D2 hinged on whether or to what extent the last claim feature "wherein the second product gas is supplied at a pressure which is higher than that at which the first product gas is supplied to the breathing gas supply apparatus", relating to the use of the apparatus, delimits the claim with respect to D2. In their letters announcing their non-attendance at the oral proceedings, neither the appellant nor the respondent addressed the Board's provisional comments. It is therefore incumbent on the board to do so. In so doing it assumes that its provisional position regarding D2 is correct; absent any comment from the parties in this regard it has no reason to deviate from this earlier position.

3.2 Claim 1 is directed at a system, whereas the final claim feature sets out a pressure relationship between these first and second product gasses to be applied when the system is in use.

The claim itself is silent as to any means which might result in a particular pressure relationship between gasses supplied to the user. The only device features of the system claimed being first and second oxygen supply apparatuses without further details that might imply a particular relative pressure relationship. With this in mind the skilled person will need to interpret the claim by seeking to understand how the claimed pressure relationship is achieved in the rest of the specification.

As explained above, the first, limited, gas supply apparatus is pressurised oxygen in bottles 10 (see figure 1) whereas the second, durable supply, is

continuously produced by a molecular sieve oxygen generating system 15 (MSOGS) (see specification, paragraph [0022]). Paragraph [0013] explains the invention to be based on the concept of, inter alia, supplying the second supply gas at a higher pressure than "would be used for the supply of more highly-enriched product gas". This implies that the actual pressure generated by the second supply system can be adjusted. In other words, it is not an inherent property of the system but a matter of operational settings. By the same token, delivery of the first gas product is by way of a flow control valve 11 (patent specification, paragraph [0020], figure 1). Thus the pressure of gas supplied to the breathing gas supply apparatus on line 12 depends on flow control valve settings, rather than being an inherent property of the system. Finally, to ensure only one breathing gas is supplied to line 12 at any one time, so that different pressures of the two sources can be accommodated, the second source is connected to the line 12 via an on off valve 18 and the flow control valve 18 can be turned off, or an additional non-return valve provided (see specification, figure 1 and paragraphs [0022] and [0026]).

Therefore, in the Board's view, the skilled person will interpret the last feature of claim 1 to mean that the system *can be operated* to deliver breathing air at the claimed pressure relationship (emphasis added by the Board), for example by appropriate choice of operating settings and by connection of the first and second sources via on/off valves. Thus the claimed system is not one that, when in use, always and inevitably provides breathing gas at the pressure ratio defined in the last claim feature. Rather it is a system that is merely capable of so doing. Consequently, whether or

not a prior art document discloses any specific examples of a system operating under such relative pressure conditions plays no role in the assessment of novelty. It must merely be considered whether or not such a system is capable of so operating.

3.3 Turning now to D2 and with the above interpretation of the claim in mind, the Board considers that the life support system of D2 *can* likewise be operated to provide the pressure relationship defined in claim 1.

D2, Figure 1 shows the arrangement of the life support system. A first product gas is provided from bottles 18, and a second product gas from the oxygen concentrator 2. Both are connected via three way valve 14 and pressure regulator 24 to the breathing gas supply apparatus, lines 20, 22 and masks 23.

3.4 The first product is stored in bottles 18 at a pressure of more than 110 bars, from where it is supplied via a pressure regulator/expansion device ("régulateur/ détendeur"; not shown) in a line 16 to the breathing gas supply apparatus line 20 at a pressure of below 3 bars (figure 1, page 4, line 29 to page 5 line 3).

In the context of a device for reducing pressure of gas leaving a gas bottle, the usual meaning of the term "regulator" is a device which can be adjusted to maintain a desired pressure at its output port. The skilled person thus understands the above passage of D2 to disclose a pressure regulator on the line 16 that can be adjusted to maintain any pressure below 3 bar at the supply apparatus line 20 when supplying the first product gas from the bottles 18.

The oxygen concentrator 2 can supply the second product gas at a range of pressures (page 5, lines 13 to 16: 1.5 to 2.5 bar, figure 1).

Because first and second products are delivered via the three way valve 14, with its common output line 20, gas is separately supplied from the one or other source, so can be supplied to the breathing gas supply apparatus at different pressures.

Therefore, whatever role the pressure regulator 24 in the supply line 20 may play (cf. page 5, lines 8 to 11, figure 1), since the pressure regulator in the line 16 allows the first supply gas to be regulated on the breathing gas supply apparatus line 20 to any pressure below 3 bar, thus also to below the lower range limit for supply of the second product gas (1.5 bar), the system of D2 can, by appropriate choice of settings, be operated to deliver air according to the claimed pressure relationship (second supply gas pressure is higher than first supply gas pressure).

In the light of the above, the Board considers that document D2 discloses all the features of claim 1. It follows that the ground of opposition based on Article 100 (a) EPC with Articles 54(1), 54(3) and 52(1) EPC (lack of novelty), prejudices the maintenance of the patent as granted. The Board thus confirms the decision's findings in this respect (cf. reasons, section 2.2).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated