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**D E C I S I O N**  
**of 13 February 1995**

**Case Number:** T 0669/93 - 3.2.3

**Application Number:** 86307161.9

**Publication Number:** 0219974

**IPC:** F25B 39/04, F28F 1/02

**Language of the proceedings:** EN

**Title of invention:**  
Condenser with small hydraulic diameter flow path

**Applicant:**  
Modine Manufacturing Company

**Opponent:**  
-

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 87, 88, 111

**Keyword:**  
"Claim to priority"  
"Decision re-appeals - remittal"

**Decisions cited:**  
G 0010/93, T 0063/86, T 0073/88, T 0016/87, T 0582/91

**Catchword:**  
-



Case Number: T 0669/93 - 3.2.3

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.3  
of 13 February 1995

**Appellant:** Modine Manufacturing Company  
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**Representative:** Alden, Thomas Stanley  
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**Decision under appeal:** Decision of the Examining Division of the European  
Patent Office dated 19 February 1993 refusing  
European patent application No. 86 307 161.9  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** C. T. Wilson  
**Members:** H. Andrä  
W. Moser

## Summary of Facts and Submissions

I. European patent application No. 86 307 161.9 filed on 17 September 1986 and published on 29 April 1987 under No. 0 219 974 was refused by a decision of the Examining Division dated 31 October 1991, but since correct delivery of this decision could not be proven, the official notification according to Rule 78 EPC was repeated on 19 February 1993, following a query from the Applicant dated 2 November 1992.

II. The decision was based on Claims 1 to 6 filed with letter of 9 August 1991, received on 13 August 1991.

The reason given for the refusal was that the subject-matter of Claim 1 was not novel with regard to the earlier European patent application EP-A-0 237 164.

III. On 8 January 1993, the Appellant (Applicant) filed a Notice of Appeal against the decision, paying the appeal fee on the same day. The Statement of Grounds of Appeal was filed on 28 June 1993 together with new versions of the independent Claim 1 according to the main request, a first auxiliary request and a second auxiliary request.

IV. The Appellant requests that the contested decision be set aside and that the case be remitted to the first instance for further prosecution based on the following documents:

### **Main request:**

Claim 1 marked "Claim 1 of main request" and filed with letter of 28 June 1993, received on 1 July 1993;  
Claims 2 to 6 filed with letter of 9 August 1991, received on 13 August 1991.

Alternatively, the further prosecution of the case is based on Claim 1 according to the first auxiliary request and on Claim 1 according to the second auxiliary request, respectively filed with letter of 28 June 1993, received on 1 July 1993, and on the respective Claim 2 to 6 according to the main request.

As an auxiliary request, the Appellant further demands that oral proceedings be held in the event that the main request is not granted.

V. Claim 1 according to the main request reads as follows:

"A condenser suitable for use in a refrigeration or air conditioning system to condense a refrigerant vapour into a refrigerant liquid, the condenser comprising a pair of spaced headers (10, 12) for receiving refrigerant vapour and for collecting condensed refrigerant; and a plurality of tubes (20) extending in hydraulic parallel between said headers, each tube being in fluid communication with each said header and each tube defining a plurality of discrete hydraulically parallel fluid flow paths, each said fluid flow path having a hydraulic diameter in the range of 0.015 to 0.07 inches."

Claim 1 according to the first auxiliary request reads as follows:

"A condenser suitable for use in a refrigeration or air conditioning system to condense a refrigerant vapour into a refrigerant liquid, the condenser comprising a pair of spaced headers (10, 12) for receiving refrigerant vapour and for collecting condensed refrigerant; and a plurality of tubes (20) extending in hydraulic parallel between said headers, each tube being in fluid communication with each said header and each

tube defining a plurality of discrete hydraulically parallel fluid flow paths, each said fluid flow path having a hydraulic diameter in the range illustrated in Figure 3, left-side under "invention" as "cavity diameter - inches."

Claim 1 according to the second auxiliary request reads as follows:

"A condenser suitable for use in a refrigeration or air conditioning system to condense a refrigerant vapour into a refrigerant liquid, the condenser comprising a pair of spaced headers (10, 12) for receiving refrigerant vapour and for collecting condensed refrigerant; and a plurality of tubes (20) extending in hydraulic parallel between said headers, each tube being in fluid communication with each said header and each tube defining a plurality of discrete hydraulically parallel fluid flow paths, each said fluid flow path having a hydraulic diameter in the range of 0.015 to 0.040 inches."

VI. In respect of the independent Claim 1 underlying the contested decision and corresponding to the present Claim 1 according to the second auxiliary request, the Appellant argues essentially as follows:

Although the range 0.015 to 0.040 inch of the hydraulic diameter of the fluid flow paths of the tubes is not expressis verbis stated in the priority document USSN 783 087, it can nevertheless be fairly said to be disclosed to a person skilled in the art by this priority document. In particular, the description and Figure 3 thereof disclose this range as a slightly narrower preferred range of hydraulic diameter value which has to be regarded as disclosed by a broader range. This approach having been adopted by the German

Federal Supreme Court should be followed by the EPO Boards of Appeal. The inventor having disclosed a broader range of the hydraulic diameter should also without losing his priority date be entitled to a somewhat narrower range.

### Reasons for the Decision

1. The appeal is admissible, the Notice of Appeal being filed before, and the Statement of Grounds of Appeal being filed within four months after the date of repeated notification of the decision appealed from.
2. In the Statement of Grounds of Appeal, the Appellant has made it clear that he no longer requests that a European patent be granted containing primarily claims as previously examined and refused by the Examining Division. Instead, he requests in accordance with the main request and the first auxiliary request that a patent containing an amended set of claims be granted.

Since Claim 1 according to the second auxiliary request, however, corresponds to the version of Claim 1 underlying the contested decision, the question of the valid priority of this claim that led to the refusal of the application under Articles 52(1) and 54 EPC has to be investigated.

3. The present application claims the priority dates of 2 October 1985 from US patent application No. 783 087 (designated in the following "first priority document") and of 5 September 1986 from US patent application No. 902 697 (designated in the following "second priority document"). As stated in the contested decision, the first priority document discloses a

condenser having all features of Claim 1 underlying said decision with the exception of the values for the range of the hydraulic diameter  $0.015 \leq d_h \leq 0.04$  inch.

Instead, this priority document specifies a range of  $0.015 \leq d_h \leq 0.07$  inch and does not indicate anywhere that the upper boundary value may be reduced to 0.04 inch. Since, on the other hand, the second priority document discloses an identical condenser wherein, however, the hydraulic diameter is restricted to the range of 0.015 to 0.04 inch, the first instance considered that Claim 1 could only have a claim to priority according to the second priority document.

According to the practice of the Boards of Appeal, it was considered, e.g. in the decisions T 73/88 (OJ EPO 1992, 567), T 16/87 (OJ EPO 1992, 212) and T 582/91 of 11 November 1992 (not published), that the claim to priority is not lost in the case when the subsequent application contains a feature which, although not disclosed in the earlier application, merely limits the scope of protection of the patent vis-à-vis the disclosure of the priority document provided that the character and the nature of the invention claimed is not changed due to the additional feature (cf. T 73/88, section "2. Priority", in particular section 2.4 in which it is stated "...in the Board's view it was not the intention of Articles 87 to 89 EPC... that a Patentee should forfeit his claim to priority (and potentially the validity of his patent) as a result of such a reduction in the scope of protection of his patent as compared to the disclosure in the priority document").

4. The Board considers that in the present case the above cited principle originating from a well-established practice of the Boards of Appeal should be applied.

Hence, it has first to be decided whether the said additional feature limits the scope of protection vis-à-vis the disclosure of the first priority document.

The range  $0.015 \leq d_h \leq 0.04$  constitutes a partial scope of the range  $0.015 \leq d_h \leq 0.07$  with coinciding lower scope boundaries. Since all values  $d_h$  of the former range fall within or coincide with the boundaries of the latter range, the substitution of the range  $0.015 \leq d_h \leq 0.04$  for the range  $0.015 \leq d_h \leq 0.07$  in fact limits the range of the hydraulic diameter of the fluid flow path.

The second question to be answered is whether, as a matter of substance, the earlier filed application is in respect of the same invention as the invention claimed in the European application (cf. decision T 73/88, section 2.1).

As illustrated already in above sections 2 and 3, the first priority document discloses a condenser having all features of Claim 1 underlying the contested decision and corresponding to Claim 1 of the second auxiliary request except for the values for the range of the hydraulic diameter ( $0.015 \leq d_h \leq 0.07$  inch according to the first priority document) which range has been limited to  $0.015 \leq d_h \leq 0.04$  in said Claim 1.

As stated in the introductory portion of the description according to both the first priority document and the application as filed, the prior art condensers, in order to prevent overly high pressure differentials in the tubes from the vapour inlet to the outlet, dispose of relatively large-sized flow passages within the tubes which leads to the air side of the tubes being relatively large in size. This means that on the frontal area of the air side, less area is available in which



air side fins may be disposed to enhance heat transfer. Thus, an undesirably large amount of energy is required for moving the necessary volume of air through the condenser air side in order to maintain a desired rate of heat transfer.

Both the invention according to the first priority document and the invention according to the application as originally filed are concerned with overcoming the above-stated problems. In accordance with the respective independent Claims 1, the solutions to the problems differ only in that the range for the hydraulic diameter of the fluid flow path according to Claim 1 of the second auxiliary request is reduced in respect of the corresponding range according to the first priority document whilst remaining within the range indicated in this priority document. As compared with the disclosure of the first priority document, the range of the hydraulic diameter  $0.015 \leq d_h \leq 0.04$  of present Claim 1 has to be regarded as a waiver in respect of a part of the range disclosed in the priority document of the kind of a disclaimer without any novel feature being introduced.

Thus, the inclusion of the particular technical feature  $0.015 \leq d_h \leq 0.04$  inch in Claim 1 of the application in suit does not change the character and the nature of the invention as such.

Hence, in the opinion of the Board, the criteria set up in the above-cited practice of the Boards of Appeal for acknowledgment of the claim to priority are complied with in the present case and it follows that Claim 1 according to the second auxiliary request is entitled to the priority 2 October 1985 (first priority document).

5. The independent Claims 1 according to the main request and the first auxiliary request have not yet been the subject-matter of examination in the proceedings before the first instance.

A comparison of the subject-matter of these claims with that of the originally filed claims shows that the features relating to the hydraulic diameter of the tube flow path in the range of  $0.015 \leq d_h \leq 0.07$  inch or in the range illustrated in Figure 3 of the drawings do not form part of any of the original Claims 1 to 9. It is, therefore, questionable whether the European search has included the subject-matter of the present claims according to the main and the first auxiliary request.

6. In previous decisions of the Boards of Appeal (see e.g. T 63/86, OJ EPO 1988, 224) it was held that cases in which substantial amendments were requested on appeal should be remitted to the first instance for further prosecution. In this way, the Appellant is put in a position to appeal to the second instance in respect of the allowability of the amended claims.

Furthermore, relating to the issue of remittal of a case for further prosecution, in decision G 10/93 of the Enlarged Board of Appeal dated 30 November 1994 (see section 5), it is held that in answering this question it has to be taken into consideration whether the factual situation has changed and what is the point of view of the Applicant in respect of the "loss of an instance".

7. In the present case, the claims according to the main request and the first auxiliary request require an examination in substance as illustrated above. Furthermore, the Appellant requests that the case be remitted to the first instance for further prosecution.

In these circumstances, the Board has accordingly decided to exercise its power under Article 111(1) EPC to remit the case to the Examining Division for further prosecution.

The auxiliary request of the Appellant for oral proceedings is without object since the Board has complied with the main request of the Appellant to set aside the decision to refuse the application and to remit the case for further prosecution to the first instance based on Claim 1 marked "Claim 1 of the Main Request" and Claims 2 to 6 filed with letter of 9 August 1991.

**Order**

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

1. The contested decision is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of the claims set out under above section IV.

The Registrar:



N. Maslin

The Chairman:



C. T. Wilson

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