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D E C I S I O N
of 5 December 2000

Case Number: T 0839/96 - 3.3.1

Application Number: 89119265.0

Publication Number: 0406479

IPC: C10M 105/38

Language of the proceedings: EN

Title of invention:
Refrigeration lubricants

Patentee:
JAPAN ENERGY CORPORATION

Opponent:
RWE- DEA Aktiengesellschaft für Mineraloel und Chemie
Mobil Oil Corporation
The Lubrizol Corporation
UNILEVER N.V. / UNILEVER PLC

Headword:
Neopentyl glycolesters/JAPAN ENERGY

Relevant legal provisions:
EPC Art. 54(3), 56, 123(2) and (3)

Keyword:
"Amendments - added subject-matter: main request (yes); first
auxiliary request (no)"
"First auxiliary request: novelty (yes); inventive step (yes)
- non-obvious combination of features"

Decisions cited:
G 0010/91, T 0012/81, T 0206/83, T 0124/87, T 1066/92

Catchword:

-



Case Number: T 0839/96 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 5 December 2000

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Decision under appeal:

Interlocutory decision of the Opposition Division
of the European Patent Office posted 16 July 1996
concerning maintenance of European patent
No. 0 406 479 in amended form.

Composition of the Board:

Chairman: A. J. Nuss
Members: P. P. Bracke
J. P. B. Seitz

Summary of Facts and Submissions

- I. The appeal lies from the Opposition Division's interlocutory decision, announced orally on 24 June 1996, with the reasoned decision being issued on 16 July 1996, that, account being taken of the amendments made by the Patentee during the opposition proceedings, European patent No. 0 406 479 was found to meet the requirements of Article 123(2) EPC, novelty and inventive step over *inter alia* documents
- (1) Materials Compatibility of R 134a in Refrigerant Systems, presented at the ASHRAE Winter Meeting in January 1989 by K.S. Sanvordenker, June 1989;
 - (2) Synthetic Lubricants and Their Refrigeration Applications, presented by Glenn D. Short at the 44th Annual Meeting of the ASHRAE in Atlanta, Georgia, May 1-4, 1989;
 - (8) the English translation of JP-A-55-105644;
 - (13) WO 90/12849; and
 - (14) the English translation of JP-A-55-157537.

The set of claims underlying the decision consisted of 10 claims for the contracting states DE FR GB IT SE and 11 claims for the contracting state ES. Claim 1 for the contracting states DE FR GB IT SE read:

"Use of a lubricant for compressors using a hydrofluorocarbon refrigerant containing no chlorine, comprising as a main component an ester(s) obtained by reacting (a) neopentyl glycol with (b) a mixture of at

least one of straight chain monovalent saturated fatty acids having a carbon number of 5-10 and at least one of branched-chain monovalent saturated fatty acids having a carbon number of 7-9, wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used."

II. With letter of 6 November 2000 the Respondent (Proprietor) filed as auxiliary requests 1 and 2 two sets of claims, each consisting of claims for the contracting states DE FR GB IT SE and for the contracting state ES.

The independent claims of the first auxiliary request for the contracting states DE FR GB IT SE read:

"1. Use of a lubricant for compressors using a hydrofluorocarbon refrigerant containing no chlorine, comprising as a main component an ester(s) obtained by reacting (a) neopentyl glycol with (b) a mixture of at least one of straight chain monovalent saturated fatty acids having a carbon number of 5-10 and at least one of branched-chain monovalent saturated fatty acids selected from isoheptanoic acid, 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid, wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used."

"4. Use of a lubricant for compressors using a hydrofluorocarbon refrigerant containing no chlorine, comprising as a main component an ester(s) obtained by reacting (a) neopentyl glycol with (b) a mixture of at least one of straight chain monovalent saturated fatty

acids having a carbon number of 5-10 and at least one of branched-chain monovalent saturated fatty acids selected from isoheptanoic acid, 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid, wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used, and (c) at least one polybasic acid having a carbon number of 4-10, wherein the amount of the polybasic acid is not more than 80 mol% per total monovalent saturated fatty acid used."

"8. A lubricant for compressors using 1,1,1,2-tetrafluoroethane refrigerant, comprising as a main component an ester(s) obtained by reacting (a) neopentyl glycol with (b) a mixture of at least one of straight chain monovalent saturated fatty acids having a carbon number of 5-10 and at least one of branched-chain monovalent saturated fatty acids selected from isoheptanoic acid, 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid, wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used, and (c) at least one polybasic acid having a carbon number of 4-10, wherein the amount of the polybasic acid is not more than 80 mol% per total monovalent saturated fatty acid used."

The independent Claims 1, 4 and 9 of the first auxiliary request for the contracting state ES were identical with Claims 1, 4 and 8 respectively of the first auxiliary request for the contracting states DE FR GB IT SE. Claim 8 of the first auxiliary request for the contracting state ES read:

"A method for preparing a lubricant for compressors

using 1,1,1,2-tetrafluoroethane refrigerant by preparing a lubricant, comprising as a main component an ester(s) obtained by reacting (a) neopentyl glycol with (b) a mixture of at least one of straight chain monovalent saturated fatty acids having a carbon number of 5-10 and at least one of branched-chain monovalent saturated fatty acids selected from isoheptanoic acid, 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid, wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used, and (c) at least one polybasic acid having a carbon number of 4-10, wherein the amount of the polybasic acid is not more than 80 mol% per total monovalent saturated fatty acid used."

In the set of claims of the first auxiliary request for the contracting states DE FR GB IT SE as well as in the set of claims of the first auxiliary request for the contracting state ES Claims 2 and 3 were dependent in particular on Claim 1 and Claims 5 to 7 were dependent in particular on Claim 4.

III. During the oral proceedings before the Board of Appeal, which took place on 5 December 2000, the two Parties as of right (03) and (04), i.e. the Opponents 03 and 04, were not present.

IV. The Appellant (Opponent 02) and the Party as of right (01) (Opponent 01) objected in particular that the sets of claims underlying the contested decision did not meet the requirement of Article 123(2) EPC, because by the term "saturated" and by the features "wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent

saturated fatty acid used" and "at least one polybasic acid having a carbon number of 4-10, wherein the amount of the polybasic acid is not more than 80 mol% per total monovalent saturated fatty acid used", subject-matter was added which extended beyond the content of the application as filed.

Moreover, they argued that the claimed subject-matter was not novel over the teaching of document (13) and that it was obviously derivable from the teaching of document (1) alone or in combination with the teachings of documents (8) and (14).

- V. The Respondent submitted that it was implicitly disclosed in the application as filed that the straight chain and branched-chain monovalent fatty acids were saturated ones, that the feature "not less than 50 mol-%" concerns the amount of branched-chain fatty acids and that the amount of polybasic acid of not more than 80 mol% per total fatty acid used relates to the monovalent saturated fatty acids.

The Respondent also submitted that the claimed subject-matter was novel over the teaching of document (13) and he argued that the objective problem in view of document (1) may be formulated as providing lubricants displaying a superior miscibility behaviour with chlorine free refrigerants at low temperatures. Since such superior miscibility behaviour had not been suggested in any of the cited prior art documents, the claimed subject-matter could not be deduced from the cited prior art documents.

- VI. The Appellant requested that the decision under appeal be set aside and that the European patent No. 0 406 479

be revoked. He further requested that a fresh ground of opposition under Article 100(b) EPC be introduced in the appeal proceedings.

The Respondent requested that the appeal be dismissed and that the patent be maintained in the form amended by the first instance (main request), or on the basis of one of his two auxiliary requests filed with letter dated 6 November 2000 (auxiliary requests 1 and 2).

Reasons for the Decision

1. The appeal is admissible.
2. *Main request*
 - 2.1 Article 123(2) and (3) EPC

Although the Respondent agreed that it was nowhere explicitly mentioned in the application as filed that the branched-chain fatty acids were **saturated**, he was of the opinion that a skilled person would learn from the list of monovalent fatty acids in the paragraph bridging pages 6 and 7 of the application as filed that monovalent **saturated** fatty acids were meant, since for branched-chain monovalent fatty acids having a carbon number of 7 to 9 one example of a **saturated** fatty acid can be found for each number of carbon atoms, namely isoheptanoic acid, 2-ethyl hexanoic acid and 3,5,5-trimethyl hexanoic acid, and no examples of unsaturated branched-chain fatty acids having a carbon number of 7 to 9 are provided.

However, in deciding whether with the feature

"**saturated**", in connection with the stated branched-chain monovalent fatty acids, subject-matter is added which extends the content of the application as filed, it is only relevant according to the established jurisprudence of the Boards of Appeal what the application as filed directly and unambiguously disclosed to a person skilled in the art.

Since, in the present case, the paragraph bridging pages 6 and 7 of the application as filed listed not only saturated fatty acids, but also unsaturated fatty acids, namely palmitoleic acid and oleic acid, a person skilled in the art would deduce therefrom that fatty acids could be used for preparing the lubricant ester independent thereof whether these fatty acids were saturated or unsaturated. That the two specifically cited unsaturated acids do not have a carbon number of 7 to 9 is thereby irrelevant, since it clearly follows from the concerned paragraph, which starts with the wording "As the monovalent fatty acid, mention may be made of ...", that the fatty acids cited therein are only given as examples and nowhere could a skilled person find any disclosure defining among these the branched - chain saturated fatty acids having the stated specific number of carbon atoms as a particular sub-group of monovalent fatty acids.

Additionally, the Respondent submitted that it was common general knowledge that in lubricant esters, wherein fatty acids having a carbon number of 7-9 are incorporated, always **saturated** fatty acids are used by virtue of their higher stability. As support of this submission he referred to Tables 6 and 7 in an article, published in "Proceedings of the Industrial Lubrication Symposium London 1965, pages 21 to 40," only mentioning

synthetic lubricants of ester types obtained from **saturated** branched-chain fatty acids when having a carbon number of 7 to 9 and to several Japanese patent specifications cited by the opponents during the opposition proceedings.

It is, however, normally accepted that common general knowledge is represented by basic handbooks and textbooks on the subject in question and that normally other sources such as patent specifications are not part of common general knowledge (see, for example, T 206/83, OJ EPO 1987, 5, points 5 and 6 of the Reasons for the Decision). Therefore, neither the Japanese patent specifications nor the proceedings of a symposium qualify as supporting evidence for making the existence of common general knowledge credible. Apart from that, in the Tables referred to, which concern the thermal and hydrolytic stability of trimethylolpropane, pentaerythritol and dipentaerythritol, neopentyl **glycol** esters are not mentioned and, therefore, those Tables do not provide any information about the properties of the neopentyl **glycol** esters according to Claim 1.

Consequently, the Board comes to the conclusion that by specifying in Claim 1 that the branched-chain monovalent fatty acids having a carbon number of 7 to 9 must be saturated, subject-matter was added extending beyond the content of the application as filed, contrary to the requirement of Article 123(2) EPC.

3. *First auxiliary request*

3.1 Fresh ground of opposition

At the oral proceedings before the Board the Appellant

objected that the patent in suit did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, because the fatty acids in the experimental part of the patent in suit were only defined by their carbon number, without defining which specific isomer was used. The Respondent, however, expressly stated that he did not agree that such fresh ground of opposition would be considered by the Board.

Since insufficiency of disclosure under Article 100(b) EPC was not cited by any of the Opponents as an opposition ground and according to the jurisprudence of the Boards of Appeal fresh grounds for opposition may not be introduced at the appeal stage without the explicit consent of the Patentee, the Board at that stage of the proceedings does not have the competence to consider whether the invention is sufficiently disclosed (see G 10/91 OJ EPO 1993, 420, point 18 of the opinion).

The Appellant requested that the case be remitted to the Opposition Division, as it was decided in the case T 1066/92 of 5 July 1995 (not published in OJ EPO), where the Board found that the objection under Article 100(b) EPC appeared *prima facie* that highly relevant that it should be examined before assessing novelty and inventive step. In the present case, however, the mere fact that the fatty acids for preparing esters as presented in Table 1 of the patent in suit are only defined by the number of carbon atoms cannot be said to foreshadow that the patent in suit does not sufficiently disclose the invention. Therefore, the Board comes to the conclusion that the objection under Article 100(b) EPC is not *prima facie*

that relevant that the case be remitted to the Opposition Division.

3.2 Article 123(2) EPC

3.2.1 The Appellant and the Party as of right (01) contested that support could be found in the application as filed for the feature that the straight chain monovalent fatty acids having a carbon number of 5 to 10 according to the independent claims are saturated ones.

Since, however, in the paragraph bridging pages 6 and 7 of the application as filed each possible saturated monovalent fatty acid having a carbon number of 5-10 has been specifically cited, namely pentanoic acid, hexanoic acid, heptanoic acid, octanoic acid, nonanoic acid and decanoic acid, and the disclosure of each possible compound of a generic group is identical with the disclosure of the generic group itself, it could directly and unambiguously be derived from the application as filed that the straight chain monovalent fatty acids having a carbon number of 5 to 10 could be saturated ones.

3.2.2 The same parties also contested that there was any support for the mixture of monovalent fatty acids used to prepare the ester(s) according to the independent claims, since neither the selection of three fatty acids from the group of branched-chain monovalent saturated fatty acids nor mixtures of isoheptanoic, 2-ethylhexanoic acid or 3,5,5-trimethylhexanoic acid with a straight chain fatty acid according to the independent claims were disclosed in the application as filed.

However, by the explicit disclosure in the paragraph bridging pages 6 and 7 of the application as filed of both the specific straight chain and branched-chain fatty acids indicated in the present independent claims, combined with the disclosure in the third paragraph on page 7 of the application as filed that a mixture of a straight chain fatty acid having a carbon number of preferably 5-10 and a branched-chain fatty acid having a carbon number of preferably 7 to 9 as the monovalent fatty acid is suitable for preparing lubricant esters, a mixture of the disclosed straight chain fatty acids having a carbon number of 5 to 10 with the disclosed branched-chain fatty acids having a carbon number of 7 to 9, i.e. isoheptanoic acid, 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid, for preparing the ester is directly and unambiguously disclosed to a person skilled in the art.

3.2.3 Furthermore, they argued that the feature "wherein the amount of the branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used" was not supported by the application as filed, because the disclosure in the third paragraph on page 7 of the application as filed, that the amount of the straight or branched-chain fatty acid used is preferable to be not less than 50 mol% per the total monovalent fatty acid, did not make sense, since the mixture of monovalent fatty acids used for preparing the lubricant esters consisted of straight chain and branched-chain fatty acids only and, consequently, the amount of at least one of the straight chain and branched-chain fatty acids is automatically not less than 50 mol% per the total monovalent fatty acid. Since the disclosure in the last sentence in the third paragraph on page 7 of the

application as filed should, consequently, be neglected as being superfluous, the said feature added subject-matter not originally disclosed to the content of the application as filed.

In assessing whether the requirement of Article 123(2) EPC is fulfilled, however, the only relevant question is whether all features were directly and unambiguously disclosed in the application as filed, not whether the disclosure of such features was superfluous. Since in the present case the possibility that branched-chain monovalent saturated fatty acid is not less than 50 mol% per total monovalent saturated fatty acid used is incontestably disclosed in the application as filed, no subject matter is added by that feature extending beyond the content of the application as filed.

- 3.2.4 Additionally, it was argued that the feature "at least one polybasic acid having a carbon number of 4-10, wherein the amount of the polybasic acid is not more than 80 mol% **per total monovalent saturated fatty acid used**" did not correspond with the teaching of the last paragraph on page 7 of the application as filed, where it is taught that the polybasic acid may be esterified with neopentyl glycol in an amount of not more than 80 mol% **per total fatty acid**, since the amount of total monovalent saturated fatty acid was not identical with the amount of total fatty acid.

However, it was never contested that it was unambiguous from the teaching in the third paragraph on page 7 of the application as filed and from the wording of the independent claims, that the mixture of fatty acids used for preparing the lubricant ester contained as fatty acids **only** the cited straight chain and branched-

chain fatty acids and it remained also uncontested that the term "fatty acid" is restricted to monobasic fatty acids. Therefore, a skilled person would unambiguously derive from the application as filed, that the amount of polybasic acid in the mixture for preparing the lubricant esters should not be more than 80 mol% per total monovalent saturated fatty acid used.

3.2.5 Therefore, the Board comes to the conclusion that the application as filed discloses all features of the independent claims in an unambiguous way.

3.2.6 It was not contested that the features of Claims 2, 3, 5, 6 and 7 were unambiguously disclosed in the application as filed in the paragraph bridging pages 8 and 9, in original Claim 3 and in lines 1 to 4 on page 8 of the application as filed and that the method for preparing a lubricant according to Claim 8 for ES was implicitly disclosed.

3.2.7 Consequently, the subject-matter of all claims meets the requirement of Article 123(2) EPC. Moreover, since by the amendments made the claimed subject-matter is restricted, which was not contested, the subject-matter of all claims also meets the requirement of Article 123(3) EPC.

3.3 Novelty

3.3.1 Document (13), which is state of the art according to Article 54(3) EPC, concerns liquid compositions useful as refrigeration liquids and containing as a major amount at least one fluorine containing hydrocarbon with one or two carbon atoms and as a minor amount at least one carboxylic ester of a polyhydroxy compound

with a carboxylic acid (page 1, first paragraph, and the paragraph bridging pages 5 and 6). The fluorine containing hydrocarbon contains preferably only carbon, hydrogen and fluorine (page 8, lines 18 and 19), the polyhydroxy compound may be *inter alia* neopentyl glycol (page 11, last line) and the carboxylic acid used for preparing the ester may be a mixture of *inter alia*

- (i) a straight chain hydrocarbyl group containing 1 to 7 carbon atoms and/or a branched chain hydrocarbyl group containing 4 to 20, preferably 5 to 20, more preferable 5 to 14 carbon atoms and
- (ii) a straight chain hydrocarbyl group containing 8 to 22, preferably 8 to 14 carbon atoms

(page 12, line 6 to page 13, line 2 and in more general form, Claim 10).

As straight chain hydrocarbyl group containing 1 to 7 carbon atoms *inter alia* pentanoic acid, hexanoic acid and heptanoic acid and as branched-chain hydrocarbyl groups *inter alia* 3, 5, 5-trimethylhexanoic acid and 2-ethylhexanoic acid are cited on page 13, line 29 to page 14, line 7. As straight chain hydrocarbyl group containing 8 to 22 carbon atoms *inter alia* decanoic acid is cited on page 14, lines 16 to 20.

- 3.3.2 Although the Appellant and the Party as of right (01) agreed that in none of the examples a neopentyl glycol ester is described, they were of the opinion that all features of Claim 1 were described in document (13), which document was, consequently, to be considered as destroying the novelty of Claim 1 of both sets of claims.

3.3.3 However, in assessing novelty, the content of a document must not be considered as a reservoir from which features pertaining to separate embodiments could be combined in order to create artificially a particular embodiment. In order to be novelty destroying the teaching of a document must be such that a skilled person would seriously contemplate combining the different features cited in that document. This is not the case here, since in document (13) there is nowhere a hint to specifically prepare esters by reacting neopentyl glycol with a mixture of straight chain and branched-chained fatty acids as defined in present Claim 1. Hence, document (1) cannot be considered to destroy the novelty of Claim 1 for DE FR GB IT SE and of Claim 1 for ES.

3.3.4 For the same reasons independent Claims 4 and 8 for DE FR GB IT SE and Claims 4, 8 and 9 for ES are novel over the teaching of document (13).

3.3.5 The Appellant submitted that document (13) destroyed the novelty of the claimed subject-matter according to the principles set out in T 12/81 (OJ EPO 1982, 296) and T 124/87 (OJ EPO 1989, 491).

In T 12/81 it was decided that from a known chemical substance a particular stereospecific form - though not explicitly mentioned - is anticipated if it proves to be the inevitable but undetected result of one of a number of processes adequately described in a prior publication by indication of the starting compound and the process. In the present case, however, the lubricant esters according to the claims are not the inevitable result of one of a number of known processes with a known starting compound. Starting from the

teaching of document (13) such lubricant esters could only be obtained in several steps by selecting neopentyl glycol as polyhydroxy compound and by selecting a mixture of specific straight chain and branched-chain fatty esters as carboxylic acid. If from the teaching of a prior art document a selection has to be made within at least two variable groups in order to come to the claimed subject-matter, such document cannot be considered as destroying the novelty of that claimed subject-matter.

In T 124/87 the competent Board found that a copolymer defined by its chemical composition, its density and its melt index was not novel over the teaching of a document describing copolymers having that same chemical composition, the same density over a wide range and an overlapping melt index, since the **combination** of three claimed requirements were clearly taught in the prior art document. In the present case, however, the **combination** of neopentyl glycol with a mixture of fatty acids as defined in the claims was not disclosed in document (13).

3.4 Inventive step

- 3.4.1 There was dispute about whether document (1) or document (2) represented the most relevant prior art. Whereas the Appellant and the Respondent agreed that document (1) represented the most relevant prior art, the Party as of right (01) was of the opinion that this was represented by document (2).

In selecting the most relevant prior art for the purpose of assessing inventive step, the first consideration is that it must be directed to a similar

use. In the present case, the patent in suit relates to lubricants suitable for use in the compression of refrigerants containing no chlorine, such as HFC-134a (1,1,1,2-tetrafluoroethane).

In document (2) neopentyl esters are only disclosed as refrigeration lubricants for **chloro**fluorocarbon (CFC) (see under the heading on page 4, right-hand column "Synthetic Lubricants for Chlorofluorocarbon (CFC) Application" in combination with the teaching under the heading in the right-hand column on page 6 "Neopentyl Esters (Polyol Esters)"), whereas in the part concerning "Lubricants for Refrigerant - 134a (R-134a) Applications" neopentyl esters are not mentioned. Since it may not be derived from document (2) that neopentyl esters are suitable lubricants for use in the compression of refrigerants containing no chlorine, and, to the contrary, document (1) indisputably relates to the compatibility, in particular the miscibility, of R-134a with lubricants and specifically mentions the compatibility of neopentyl esters with R-134a (see page 213, left-hand column, second paragraph and Figure 3), document (1) represents a more relevant prior art for the purpose of assessing inventive step.

3.4.2 From Figure 3 of document (1), showing the miscibility domes for two undefined neopentyl esters, it follows that the neopentylesters display at a mixture ratio of 80% R-134a and 20% neopentylester a lower miscibility temperature of -20°C.

3.4.3 According to the description of the patent in suit (page 3, lines 51 to 53) the problem underlying the invention was to provide a refrigeration lubricant having an excellent compatibility with refrigerants

containing no chlorine such as HFC-134a within *inter alia* a wide temperature range.

- 3.4.4 The patent in suit claims to solve this problem by the neopentyl glycol esters according to the independent claims.

With letter of 9 December 1991 the Respondent filed during the examining proceedings additional data showing that esters of neopentyl glycol with mixtures of n-octanoic acid and 2-ethyl hexanoic acid have a two phase separation temperature of -46°C when the straight chain and the branched-chain fatty acid are used in a mole ratio of 50:50 and $\leq -50^{\circ}\text{C}$ when such fatty acids are used in a mole ratio of 30:70. From a comparison of those two-phase separation temperatures with the miscibility domes for the two undefined neopentyl esters in Figure 3 of document (1) (see point 3.4.2) it follows that the tested neopentyl glycol esters according to the present invention display a superior miscibility behaviour at low temperatures with R-134a. In the absence of any proof of the contrary, the Board has no reason to doubt that the additional data provided with letter of 9 December 1991 are representative for all neopentyl glycol esters according to the independent claims and for all chlorine free refrigerants.

The Board therefore accepts that a credible case has been put forward that the problem underlying the invention, as defined in point 3.4.3, is effectively solved by the neopentyl glycol esters according to the invention.

- 3.4.5 It remains to be decided, whether, in the light of the teachings of the cited documents, a skilled person seeking to solve the above-mentioned problem, would have arrived at the claimed use and lubricants in an obvious way.
- 3.4.6 The Appellant and the Party as of right (01) were of the opinion that a skilled person would have done so, since document (1) discloses the use of neopentyl esters as lubricants for compressors using R-134a, documents (8) and (14) disclose neopentyl ester lubricants of the same kind as that of the patent in suit and the claimed invention concerns thus only the use of a known neopentyl ester lubricant as recommended in document (1) for the purpose taught in document (1).

Documents (8) and (14) relate to lubricants comprising an ester of neopentyl polyol, such as neopentyl glycol, with a mixture of 3,5,5-trimethylhexanoic acid and a saturated straight fatty acid, such lubricants having high oxidation stability and generating a very small amount of carbonaceous materials and therefore being suitable as air compressor oil, as a technical lubricant oil or as a lubricant of an internal combustion engine (see document (8), page 2, second paragraph; page 3, first paragraph, the paragraph bridging pages 3 and 4; page 4, second paragraph and page 5, fourth paragraph; and document (14), page 2, second paragraph; page 4, last paragraph; page 5, first paragraph and page 6, fourth paragraph).

Documents (8) and (14), being merely concerned with neopentyl esters having high oxidation stability, are completely silent about the influence of such esters on the miscibility behaviour with refrigerants, let alone

with refrigerants containing no chlorine. Therefore, a skilled person looking for lubricant esters having improved compatibility with refrigerants containing no chlorine could not have found any hint in any of documents (8) and (14) that the esters described therein have a superior miscibility behaviour at low temperatures.

3.4.7 A skilled person did thus not have any incentive to combine the teaching of document (1) with the teachings of documents (8) or (14) and, consequently, the claimed use and lubricants were not obviously derivable from the combined teachings of documents (1), (8) and (14).

4. *Second auxiliary request*

In the light of the above findings, there is no need to consider the second auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent with the following claims and a description to be adapted:
 - Claims for DE, FR, GB, IT, SE: 1 to 8 of the first auxiliary request filed with letter dated 6 November 2000
 - Claims for ES: 1 to 9 of the first auxiliary request filed with letter dated 6 November 2000.

The Registrar:

The Chairman:

N. Maslin

A. Nuss