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**Datasheet for the decision
of 29 September 2011**

Case Number: T 0435/08 - 3.3.10

Application Number: 00916582.0

Publication Number: 1163312

IPC: C09K 5/04

Language of the proceedings: EN

Title of invention:

Azeotrope-like compositions of 1,1,1,3,3-pentafluorobutane

Patentee:

E.I. DU PONT DE NEMOURS AND COMPANY

Opponent:

Solvay (Société Anonyme)
3M Innovative Properties Company

Headword:

Azeotrope-like compositions/3M

Relevant legal provisions:

EPC Art. 111(1), 123(2), 123(3)

Keyword:

"Main request, first and second auxiliary requests: extension
of protection conferred (yes)"

"Third auxiliary request: extension of protection conferred
(no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0435/08 - 3.3.10

DECISION
of the Technical Board of Appeal 3.3.10
of 29 September 2011

Appellant: E.I. DU PONT DE NEMOURS AND COMPANY
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Representative: -

Respondent II: 3M Innovative Properties Company
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Representative: -

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 21 December 2007
revoking European patent No. 1163312 pursuant
to Article 101 (3) b) EPC.

Composition of the Board:

Chairman: P. Gryczka
Members: C. Komenda
J.-P. Seitz

Summary of Facts and Submissions

I. The Appellant (Patentee) lodged an appeal against the decision of the Opposition Division which revoked the European patent No. 1 163 312. The wording of claim 1 as granted for the contracting states DE, ES, FR, GB and IT was as follows:

"1. An azeotrope-like 1,1,1,3,3-pentafluorobutane-containing composition, wherein said composition is selected from the group consisting of:

- (i) compositions consisting essentially of 1-99 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane and 1-99 weight percent 1,1,1,3,3-pentafluorobutane, wherein said composition has a vapor pressure of from 58.6 kPa to 100.9 kPa at a temperature of 40°C;
- (ii) compositions consisting essentially of 1-95 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-15 weight percent methanol, wherein said composition has a vapor pressure of from 72.9 kPa to 112.2 kPa at a temperature of 40°C;
- (iii) compositions consisting essentially of 1-95 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-15 weight percent ethanol, wherein said composition has a vapor pressure of from 72.2 kPa to 105.5 kPa at a temperature of 40°C;
- (iv) compositions consisting essentially of 1-95 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-15 weight percent isopropanol, wherein said

- composition has a vapor pressure of from 61.8 kPa to 103.2 kPa at a temperature of 40°C;
- (v) compositions consisting essentially of 1-70 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 28-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-10 weight percent acetone, wherein said composition has a vapor pressure of from 73.8 kPa to 100.3 kPa at a temperature of 40°C;
- (vi) compositions consisting essentially of 1-80 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-66 weight percent trans-1,2-dichloroethylene, wherein said composition has a vapor pressure of from 102.8 kPa to 118.8 kPa at a temperature of 40°C;
- (vii) compositions consisting essentially of 1-60 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-45 weight percent trans-1,2-dichloroethylene and 1-10 weight percent methanol, wherein said composition has a vapor pressure of from 116.0 kPa to 128.2 kPa at a temperature of 40°C;
- (viii) compositions consisting essentially of 1-60 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-45 weight percent trans-1,2-dichloroethylene and 1-10 weight percent ethanol, wherein said composition has a vapor pressure of from 107.1 kPa to 118.5 kPa at a temperature of 40°C;
- (ix) compositions consisting essentially of 1-60 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-

- 45 weight percent trans-1,2-dichloroethylene and 1-10 weight percent isopropanol, wherein said composition has a vapor pressure of from 104.6 kPa to 114.9 kPa at a temperature of 40°C;
- (x) compositions consisting essentially of 1-50 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 30-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-49 weight percent n-propyl bromide, wherein said composition has a vapor pressure of from 70.9 kPa to 106.5 kPa at a temperature of 40°C;
- (xi) compositions consisting essentially of 1-70 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-35 weight percent n-propyl bromide, and 1-10 weight percent methanol, wherein said composition has a vapor pressure of from 89.9 kPa to 117.0 kPa at a temperature of 40°C;
- (xii) compositions consisting essentially of 1-70 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-35 weight percent n-propyl bromide, and 1-10 weight percent ethanol, wherein said composition has a vapor pressure of from 85.8 kPa to 108.3 kPa at a temperature of 40°C;
- (xiii) compositions consisting essentially of 1-70 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-35 weight percent n-propyl bromide, and 1-10 weight percent isopropanol, wherein said composition has a vapor pressure of from 78.7 kPa to 105.1 kPa at a temperature of 40°C;
- (xiv) compositions consisting essentially of 1-67 and 92-99 weight percent nonafluoromethoxybutane and

- 33-99 and 1-8 weight percent 1,1,1,3,3-pentafluorobutane, wherein said composition has a vapor pressure of from 50.1 kPa to 100.9 kPa at a temperature of 40°C;
- (xv) compositions consisting essentially of 1-90 weight percent nonafluoromethoxybutane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-15 weight percent methanol, wherein said composition has a vapor pressure of from 77.9 kPa to 113.2 kPa at a temperature of 40°C;
- (xvi) compositions consisting essentially of 1-60 weight percent nonafluoromethoxybutane, 39-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-10 weight percent ethanol, wherein said composition has a vapor pressure of from 82.7 kPa to 105.3 kPa at a temperature of 40°C;
- (xvii) compositions consisting essentially of 1-60 weight percent nonafluoromethoxybutane, 39-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-10 weight percent isopropanol, wherein said composition has a vapor pressure of from 82.1 kPa to 103.1 kPa at a temperature of 40°C;
- (xviii) compositions consisting essentially of 1-98 weight percent nonafluoromethoxybutane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-98 weight percent acetone, wherein said composition has a vapor pressure of from 52.1 kPa to 100.3 kPa at a temperature of 40°C;
- (xix) compositions consisting essentially of 1-75 weight percent nonafluoromethoxybutane, 1-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-64 weight percent trans-1,2-dichloroethylene, wherein said composition has a vapor pressure of

from 93.4 kPa to 118.7 kPa at a temperature of 40°C;

- (xx) compositions consisting essentially of 1-60 weight percent nonafluoromethoxybutane, 20-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-50 weight percent trans-1,2-dichloroethylene and 1-10 weight percent methanol, wherein said composition has a vapor pressure of from 113.1 kPa to 127.8 kPa at a temperature of 40°C;
- (xxi) compositions consisting essentially of 1-50 weight percent nonafluoromethoxybutane, 20-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-50 weight percent trans-1,2-dichloroethylene and 1-10 weight percent ethanol, wherein said composition has a vapor pressure of from 104.9 kPa to 113.8 kPa at a temperature of 40°C;
- (xxii) compositions consisting essentially of 1-50 weight percent nonafluoromethoxybutane, 20-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-50 weight percent trans-1,2-dichloroethylene and 1-9 weight percent isopropanol, wherein said composition has a vapor pressure of from 103.8 kPa to 111.1 kPa at a temperature of 40°C;
- (xxiii) compositions consisting essentially of 1-50 weight percent nonafluoromethoxybutane, 30-98 weight percent 1,1,1,3,3-pentafluorobutane and 1-49 weight percent n-propyl bromide, wherein said composition has a vapor pressure of from 90.7 kPa to 106.6 kPa at a temperature of 40°C; and
- (xxiv) compositions consisting essentially of 1-70 weight percent nonafluoromethoxybutane, 10-97 weight percent 1,1,1,3,3-pentafluorobutane, 1-35 weight percent n-propyl bromide and 1-10 weight percent methanol, wherein said composition has a

vapor pressure of from 93.4 kPa to 118.0 kPa at a temperature of 40°C, and with the exclusion of 1-25 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane and 75-99 weight percent 1,1,1,3,3-pentafluorobutane, 40-70 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane and 30-60 weight percent 1,1,1,3,3-pentafluorobutane, 5-20 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 75-90 weight percent 1,1,1,3,3-pentafluorobutane and 1-10 weight percent methanol, 9 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 90.5 weight percent 1,1,1,3,3-pentafluorobutane and 0.5 weight percent methanol, 10-90 weight percent 1,1,1,3,3-pentafluorobutane and 10-90 weight percent nonafluoromethoxybutane, 25-38 weight percent 1,1,1,3,3-pentafluorobutane, 60-88 weight percent nonafluoromethoxybutane and 2-5 weight percent isopropanol, and 36.4 weight percent 1,1,1,3,3-pentafluorobutane, 54.5 weight percent nonafluoromethoxybutane and 9.1 weight percent isopropanol, and wherein after 50 weight percent of said composition has evaporated or boiled off, the vapor pressure of the remaining composition has changed by 10 percent or less."

The wording of granted claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE was based on the wording of claim 1 for the contracting states DE, ES, FR, GB and IT, the only difference being at the end of claim 1, which reads as follows:

" and with the exclusion of
40-70 weight percent 1,1,1,2,3,4,4,5,5,5-
decafluoropentane and 30-60 weight percent 1,1,1,3,3-
pentafluorobutane,
10-90 weight percent 1,1,1,3,3-pentafluorobutane and
10-90 weight percent nonafluoromethoxybutane,
25-38 weight percent 1,1,1,3,3-pentafluorobutane, 60-88
weight percent nonafluoromethoxybutane and 2-5 weight
isopropanol, and
36.4 weight percent 1,1,1,3,3-pentafluorobutane, 54.5
weight percent nonafluoromethoxybutane and 9.1 weight
isopropanol,
and wherein after 50 weight percent of said composition
has evaporated or boiled off, the vapor pressure of the
remaining composition has changed by 10 percent or
less."

II. Oppositions had been filed by Respondents I and II,
which objected to the subject-matter of the patent in
suit as containing added subject-matter, that the
invention was not disclosed in a manner sufficiently
clear to be carried out by a skilled man and that the
subject-matter of the claims was not novel and did not
involve an inventive step (Article 100(a), (b) and (c)
EPC).

III. In the decision under appeal the Opposition Division
decided only on whether the amendments introduced
during the opposition proceedings fulfilled the
requirements of Article 123(2) and (3) EPC. It held
that the amendments made to the granted claims did
offend against Article 123(2) and (3) EPC, since some
of the disclaimers present in granted claim 1 were
deleted. In order to clearly identify each of the

disclaimers introduced into claim 1 as granted for the contracting states DE, ES, FR, GB and IT they were named as disclaimers a) to g), of which the following disclaimers d) to g) were deleted during opposition proceedings:

Disclaimer d): with the exclusion of "9 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 90.5 weight percent 1,1,1,3,3-pentafluorobutane and 0.5 weight percent methanol",

disclaimer e): with the exclusion of "10-90 weight percent 1,1,1,3,3-pentafluorobutane and 10-90 weight percent nonafluoromethoxybutane",

disclaimer f): with the exclusion of "25-38 weight percent 1,1,1,3,3-pentafluorobutane, 60-88 weight percent nonafluoromethoxybutane and 2-5 weight isopropanol" and

disclaimer g): with the exclusion of "36.4 weight percent 1,1,1,3,3-pentafluorobutane, 54.5 weight percent nonafluoromethoxybutane and 9.1 weight isopropanol".

In particular, the Opposition Division argued that the wording of the disclaimers, which were present in the granted claims, was not clearly directed to compositions consisting merely of the components listed therein, but were to be broadly interpreted as comprising at least the components listed in the amounts as indicated. The deletion of the disclaimers d) to g) during the opposition proceedings did reintroduce subject-matter into the claims, which according to the granted version had been excluded. Consequently, the deletion of these disclaimers did

enlarge the scope of the granted claims and, thus, offended against Article 123(3) EPC.

IV. With its statement of Grounds of Appeal the Appellant filed a main request and nine auxiliary requests, each request comprising two sets of claims for different contracting states:

Main request

The wording of claim 1 for the contracting states DE, ES, FR, GB and IT according to the main request was based on the wording of granted claim 1 with the deletion of the word "essentially" in compositions (i), with the deletion of the sub-ranges "1-67" and "33-99" weight percent in composition (xiv) and with the deletion of disclaimers d), e), f) and g).

The wording of claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE according to the main request was based on the wording of claim 1 for the same contracting states as granted with the restriction made to composition (xiv) as made for claim 1 of the main request for the contracting states DE, ES, FR, GB and IT. Further, disclaimers e), f) and g) were deleted.

First auxiliary request

The wording of claim 1 for the contracting states DE, ES, FR, GB and IT according to the first auxiliary request was based on the wording of claim 1 of the main request, with the only amendment of composition (xiv) being deleted.

The wording of claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE according to the first auxiliary request was based on the wording of claim 1 of the main request, with the only amendment of composition (xiv) being deleted.

Second auxiliary request

The wording of claim 1 for the contracting states DE, ES, FR, GB and IT according to the second auxiliary request was based on the wording of claim 1 of the main request, wherein compositions (xiv) to (xviii) were deleted and compositions (xix) to (xxiv) were restricted as to read

- "(xix) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 30-70 weight percent 1,1,1,3,3-pentafluorobutane and 10-40 weight percent trans-1,2-dichloroethylene, wherein said composition has a vapor pressure of from 104.9 kPa to 116.3 kPa at a temperature of 40°C;
- (xx) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 20-70 weight percent 1,1,1,3,3-pentafluorobutane, 15-45 weight percent trans-1,2-dichloroethylene and 1-6 weight percent methanol, wherein said composition has a vapor pressure of from 121.1 kPa to 127.8 kPa at a temperature of 40°C;
- (xxi) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 20-70 weight percent 1,1,1,3,3-pentafluorobutane, 12-45 weight percent trans-1,2-dichloroethylene and 1-6 weight percent ethanol, wherein said composition

has a vapor pressure of from 104.9 kPa to 114.8 kPa at a temperature of 40°C;

(xxii) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 20-70 weight percent 1,1,1,3,3-pentafluorobutane, 12-45 weight percent trans-1,2-dichloroethylene and 1-6 weight percent isopropanol, wherein said composition has a vapor pressure of from 103.8 kPa to 113.6 kPa at a temperature of 40°C;

(xxiii) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 30-70 weight percent 1,1,1,3,3-pentafluorobutane and 10-40 weight percent n-propyl bromide, wherein said composition has a vapor pressure of from 90.7 kPa to 106.6 kPa at a temperature of 40°C; and

(xxiv) compositions consisting essentially of 10-50 weight percent nonafluoromethoxybutane, 20-70 weight percent 1,1,1,3,3-pentafluorobutane, 12-35 weight percent n-propyl bromide and 1-6 weight percent methanol, wherein said composition has a vapor pressure of from 101.8 kPa to 113.2 kPa at a temperature of 40°C".

The wording of claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE according to the second auxiliary request was based on the wording of claim 1 of the main request, wherein compositions (xiv) to (xviii) were deleted and compositions (xix) to (xxiv) were restricted in the same way as for claim 1 of the second auxiliary request for the contracting states DE, ES, FR, GB and IT (see above).

Third auxiliary request

The wording of claim 1 for the contracting states DE, ES, FR, GB and IT according to the third auxiliary request was identical to the wording of claim 1 of the main request, wherein compositions (xiv) to (xxiv) were deleted.

The wording of claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE according to the third auxiliary request was identical to the wording of claim 1 of the main request, wherein compositions (xiv) to (xxiv) were deleted.

- V. The Appellant argued that the four disclaimers d), e), f) and g) in claim 1 as granted for the contracting states DE, ES, FR, GB and IT were to be read as excluding only compositions consisting of the components listed therein in the respective amounts. These disclaimers were relevant only with regard to the claimed compositions (i) and (xiv) to (xiv), which encompassed compositions with the particular combination of components defined in disclaimers d) to g). With the restrictions made to the definitions of compositions (i) and (xiv) the compositions to be excluded by disclaimers d), e), f) and g) were no longer falling within any of the claimed compositions in claim 1 of the main request. Therefore, these disclaimers could be deleted without offending against Article 123(3) EPC.

The same applied to the subject-matter of claim 1 for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE of the main request, as well as

for all claims 1 according to the auxiliary requests, which contained further restrictions rendering these disclaimers superfluous.

VI. The Respondent I argued that the disclaimers d), e), f) and g) had to be interpreted in a broad sense, namely as excluding not only compositions consisting only of the components listed therein in the amounts as specified, but also any composition comprising at least the specific components in the amounts as indicated. Thus, in the granted claims the disclaimers d), e), f) and g) excluded more compositions than only the compositions consisting of the components listed therein. Consequently, the deletion of these broad disclaimers even when taking into account the restrictions made to the definition of the compositions (xiv) to (xxiv) extended the claimed subject-matter and thus offended against Article 123(3) EPC.

VII. The Appellant requested that the decision under appeal be set aside and the case be remitted to the department of first instance for further prosecution on the basis of either one of its requests on file.

The Respondent I requested that the appeal be dismissed; or that if one of the Appellant's requests were to satisfy the requirements of Article 123(2) and (3) EPC, it be remitted to the first instance.

The Respondent II did not either file any statements or request in writing and informed the Board in its letter dated 1 August 2011 that he will not attend the oral proceedings summoned for 29 September 2011.

VIII. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

Main request - Claims for the contracting states DE, ES, FR, GB and IT:

2. *Article 123(2) EPC*

Claim 1 was amended by deleting the word "essentially" from the composition (i) as granted, thereby restricting composition (i) to those compositions consisting only of 1-99 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane and 1-99 weight percent 1,1,1,3,3-pentafluorobutane. This amendment finds a basis in the binary mixtures disclosed in the application as filed.

Further, in claim 1 composition (xiv) was restricted by deleting from the claimed compositions those consisting essentially of 1-67 weight percent of nonafluoromethoxybutane and 33-99 weight percent of 1,1,1,3,3-pentafluorobutane leaving only those compositions consisting essentially of 92-99 weight percent of nonafluoromethoxybutane and 1-8 weight percent of 1,1,1,3,3-pentafluorobutane.

All these amendments find a basis in the application documents. Therefore, the Board concludes that the requirements of Article 123(2) EPC are fulfilled as far

as the amendments carried out after grant of the patent are concerned. This was not disputed amongst the parties.

3. *Article 123(3) EPC*

Article 123(3) EPC requires that the claims of a patent may not be amended during opposition proceedings in such a way as to extend the protection conferred. In order to decide whether or not an amendment of the patent in suit satisfies that requirement, it is necessary to compare the protection conferred by the claims before amendment, i.e. as granted, with that of the claims after amendment.

3.1 *Scope of granted claim 1*

Claim 1 as granted is directed to the azeotrope-like compositions (i) to (xxiv) based on 1,1,1,3,3-pentafluorobutane, these compositions being restricted by excluding from their definitions compositions by the way of seven disclaimers. In order to determine the scope of granted claim 1 it has to be examined which subject-matter is excluded by these disclaimers, in particular by the following disclaimers d), e), f) and g), which were deleted in the requests as presented in the appeal proceedings.

3.1.1 *Disclaimer d)*

Disclaimer d) reads "with the exclusion of 9 weight percent 1,1,1,2,3,4,4,5,5,5-decafluoropentane, 90.5 weight percent 1,1,1,3,3-pentafluorobutane and 0.5 weight percent methanol". This open worded definition

lists three components in a particularly specified weight percentage, which sum up to exactly 100.0 weight percent. Thus, even applying the broadest possible interpretation of its wording, disclaimer d) corresponds to a single specific composition composed of these three components without any possibility for the presence of further components. Consequently, disclaimer d) excludes from the subject-matter of granted claim 1 only one specific composition.

3.1.2 Disclaimer e)

Disclaimer e) reads "with the exclusion of 10-90 weight percent 1,1,1,3,3-pentafluorobutane and 10-90 weight percent nonafluoromethoxybutane". In the absence of any clear indication as to whether this wording corresponds to "a composition consisting of", "a composition consisting essentially of" or "a composition comprising" disclaimer e) has to be interpreted as excluding from the subject-matter of granted claim 1 any composition comprising at least 10 weight percent of 1,1,1,3,3-pentafluorobutane and at least 10 weight percent of nonafluoromethoxybutane together with up to 80 weight percent of any further unspecified components, since the amount of each of these two components can be as low as 10 weight percent. Consequently, disclaimer e) excludes from the scope of granted claim 1 all the compositions defined in embodiments (xv) to (xxiv), since they all contain at least 10 weight percent of 1,1,1,3,3-pentafluorobutane and at least 10 weight percent of nonafluoromethoxybutane together with further components.

3.1.3 Disclaimer f)

Disclaimer f) reads "with the exclusion of 25-38 weight percent 1,1,1,3,3-pentafluorobutane, 60-88 weight percent nonafluoromethoxybutane and 2-5 weight isopropanol". As pointed out for disclaimer e) (see paragraph 3.1.2 *supra*) this wording does not specifically refer to "a composition consisting of", "a composition consisting essentially of" or "a composition comprising". Therefore, disclaimer f) excludes *inter alia* compositions, which contain at least 60-88 weight percent nonafluoromethoxybutane and 25-38 weight percent of 1,1,1,3,3-pentafluorobutane together with further components, for example isopropanol. Thus, disclaimer f) excludes particular compositions falling under the definitions (xv) to (xxiv) of claim 1 as granted.

3.1.4 Disclaimer g)

Disclaimer g) reads "with the exclusion of 36.4 weight percent 1,1,1,3,3-pentafluorobutane, 54.5 weight percent nonafluoromethoxybutane and 9.1 weight isopropanol" and excludes from the subject-matter of granted claim 1 only one specific composition, namely that containing the listed three components, each in a specified weight percentage, which sum up to exactly 100.0 weight percent.

3.2 *Scope of claim 1 according to the main request*

In claim 1 of the main request disclaimers d), e), f) and g) have been deleted and the definitions of the compositions (i) and (xiv) have been restricted.

The parties had divergent opinions on whether the deletion of the disclaimers d), e), f) and g) extended or not the claimed subject-matter beyond that of the patent as granted and thus offended against the requirements of Article 123(3) EPC. Thus, it has to be decided, whether the deletion of any of the disclaimers d) to g) enlarges the scope of claim 1 as granted or if by the amendments made to the claimed compositions these disclaimers could be deleted without offending against Article 123(3) EPC.

3.2.1 Deletion of disclaimer d):

As stated in paragraph 3.1.1 *supra* disclaimer d) excludes a single specific composition consisting of only the three components listed in specified weight percentages. Disclaimer d) is thus only relevant for those of the claimed compositions, which contain the same components, i.e. compositions (i) and (ii). Due to the amendments made (see paragraph 2 *supra*) the compositions (i) are, however, now restricted to compositions consisting only of the two components 1,1,1,2,3,4,4,5,5,5-decafluoropentane and 1,1,1,3,3-pentafluorobutane, which do no longer allow for the presence of 0.5 weight percent of methanol in addition to these two components. The same applies to the compositions (ii), which have to contain methanol in an amount of 1-15 weight percent, the lower limit of this

range being clearly above the amount of 0.5 weight percent methanol being specified in disclaimer d). Therefore, the composition specified in disclaimer d) does no longer fall either within the scope of compositions (i) or (ii). Thus, being superfluous in view of the amendments made to claim 1, the deletion of disclaimer d) does not offend against Article 123(3) EPC.

The Respondent argued that the amount of 0.5 weight percent of methanol specified in disclaimer d) could be rounded up to 1 weight percent, as all the claimed compositions (i) to (xxiv) contained the respective components in weight percentages indicated in integers. Thus, the disclaimer d) read in the context of the patent in suit excluded compositions comprising methanol in an amount of 1 weight percent, thus being still relevant for the compositions falling within the definition (ii).

However, disclaimer d) is very precise in specifying one single composition, which contains each of the three components at a specific percentage, the total being 100 percent, leaving thus no doubt on its purpose, i.e. to exclude this single composition containing methanol in an amount of precisely 0.5 weight percent. There is, consequently, no reason to interpret the precise wording of disclaimer d) to give it a different meaning. Therefore, the argumentation of the Respondent cannot succeed.

3.2.2 Deletion of disclaimer g):

As stated in paragraph 3.1.4 *supra* disclaimer g) excludes only one specific composition and was relevant in the claims as granted for the compositions (xiv) and (xvii). Due to the restriction of the weight ranges in claim 1 of the main request (see paragraph 2 *supra*) composition (xiv) comprises only 1-8 weight percent of 1,1,1,3,3-pentafluorobutane, whereas the composition to be excluded by disclaimer g) has to contain this component in an amount of 36.4 weight percent. Therefore, disclaimer g) is no longer relevant for composition (xvi). The same holds true for composition (xvii), which has to comprise 39-98 weight percent of 1,1,1,3,3-pentafluorobutane instead of 36.4 weight percent as specified in disclaimer g). Disclaimer g) is, thus, in view of the amendments superfluous and its deletion does not offend against Article 123(3) EPC.

3.2.3 Deletion of disclaimer e):

As stated in paragraph 3.1.2 *supra* disclaimer e) concerns compositions comprising at least 10 weight percent of 1,1,1,3,3-pentafluorobutane and 10 weight percent of nonafluoromethoxybutane and excludes from granted claim 1 all the compositions specified in embodiments (xv) to (xxiv). Therefore, the deletion of disclaimer e), while maintaining the compositions (xv) to (xiv) in claim 1 reintroduces these compositions again into claim 1 of the main request and, thus, enlarges the protection conferred by granted claim 1. Consequently, the deletion of disclaimer e) offends against the requirements of Article 123(3) EPC.

3.2.4 Deletion of disclaimer f):

As stated in paragraph 3.1.3 *supra* disclaimer f) excludes a composition comprising at least the three components listed therein in the respective weight ranges, i.e. compositions falling within the definition of the compositions (xv) to (xxiv). Consequently, the deletion of disclaimer f) reintroduces these embodiments into claim 1 of the main request and, thus, enlarges the scope of granted claim 1 offending against the requirements of Article 123(3) EPC.

3.2.5 The Appellant argued that the disclaimers e) and f) cannot be construed as broadly as to refer to compositions comprising at least the components listed therein in the respective amounts. The intention for introducing disclaimers e) and f) in granted claim 1 was to exclude only compositions consisting respectively of the two or the three components indicated therein.

However, the intention behind any amendment to a claim is of no relevance to the interpretation of its wording, since the scope of a claim is defined by its wording and not by any intentions which would have lead to this wording. Thus, the list of two or three components in specified weight percentage ranges has to be interpreted as relating to any composition comprising at least these components in their specified amounts. Consequently, the argument of the Appellant cannot succeed.

Main Request - Claims for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE

4. The amendments made to claim 1 were the same as those carried out to claim 1 of the main request for the contracting states DE, ES, FR, GB and IT, with the exception that disclaimer d) was not deleted, since this disclaimer was not present in the granted version for these contracting states. Since, however, disclaimers e) and f) have been deleted from the claims, the same arguments and considerations with regard to the objection under Article 123(3) EPC as brought forward for the main request for the contracting states DE, ES, FR, GB and IT (see paragraph 3.2.3 and 3.2.4 *supra*) also apply to the subject-matter of claim 1 of the main request for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE.

First auxiliary request - Claims for the contracting states DE, ES, FR, GB and IT:

5. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further amended by the deletion of composition (xiv) and the deletion of disclaimer e), which excluded all of the compositions (xiv) to (xxiv). As compositions (xv) to (xxiv) are still present in claim 1, the same arguments and considerations with regard to the objection under Article 123(3) EPC as brought forward for the main request (see paragraph 3.2.3 *supra*) also apply to the subject-matter of the first auxiliary request.

First auxiliary request - Claims for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE:

6. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further amended by the deletion of composition (xiv) and disclaimer e). Since disclaimer e) is relevant for all of the claimed compositions (xiv) to (xxiv) and compositions (xv) to (xxiv) are still present in claim 1, the same arguments and considerations with regard to the objection under Article 123(3) EPC as brought forward for the main request (see paragraph 3.2.3 *supra*) also apply to the subject-matter of the first auxiliary request.

Second auxiliary request - Claims for the contracting states DE, ES, FR, GB and IT:

7. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further amended by the deletion of claimed compositions (xiv) to (xviii) and a restriction of the definition of compositions (xix) to (xxiv). Since this claim has also been amended by deleting disclaimer e), which is relevant for all of the claimed compositions (xiv) to (xxiv), and compositions (xix) to (xxiv) are still present in claim 1, the same arguments and considerations with regard to the objection under Article 123(3) EPC as brought forward for the main request (see paragraph 3.2.3 *supra*) also apply to the subject-matter of the second auxiliary request.

Second auxiliary request - Claims for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE:

8. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further amended by the deletion of claimed compositions (xiv) to (xviii) and a restriction of the definition of compositions (xix) to (xxiv). Since this claim has also been amended by deleting disclaimer e), which is relevant for all of the claimed compositions (xiv) to (xxiv), and compositions (xix) to (xxiv) are still present in claim 1, the same arguments and considerations with regard to the objection under Article 123(3) EPC as brought forward for the main request (see paragraph 3.2.3 *supra*) also apply to the subject-matter of the second auxiliary request.

Third auxiliary request - Claims for the contracting states DE, ES, FR, GB and IT:

9. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further restricted by the deletion of compositions (xiv) to (xxiv). For the same reasons as given in paragraph 2. *supra* the deletion of the word "essentially" from composition (i) is regarded as to fulfil the requirements of Article 123(2) EPC. As stated in paragraphs 3.1.2 and 3.1.3 *supra* the disclaimers e) and f) were relevant only for the claimed compositions (xiv) to (xxiv). Since compositions (xiv) to (xxiv) are no longer claimed disclaimers e) and f) are superfluous and their deletion does not enlarge the scope of protection

conferred by granted claim 1. The requirements of Article 123(3) EPC are, thus, fulfilled.

This was not objected by the Respondent I.

Third auxiliary request - Claims for the contracting states AT, BE, CH, LI, CY, DK, FI, GR, IE, LU, MC, NL, PT, SE:

10. Claim 1 is based on the wording of claim 1 according to the main request for the same contracting states, which has been further amended by the deletion of compositions (xiv) to (xxiv). As stated in paragraph 9 *supra* the disclaimers e) and f) were relevant only for the claimed compositions (xiv) to (xxiv). Since compositions (xiv) to (xxiv) are no longer claimed disclaimers e) and f) are superfluous and their deletion does not offend against Article 123(3) EPC. This was not objected to by the Respondent.

11. Thus, the Board concludes that the amendments carried out in claim 1 of the auxiliary request III during the appeal proceedings fulfil the requirements of Article 123(2) EPC and that the scope of protection conferred by the claims of the auxiliary request III for all contracting states has not been broadened *vis-à-vis* that of the claims as granted, such that also the requirements of Article 123(3) EPC are satisfied.

12. *Remittal*

Having so decided, the Board has not taken a decision on the whole matter, since the Opposition Division decided solely on the issue of whether the amendments which were made during the opposition proceedings

fulfilled the requirements of Article 123(2) EPC and whether the amended claims fulfilled the requirements of Article 123(3) EPC. As the Opposition Division has not yet ruled on whether the amendments made during the examination proceedings fulfilled the requirements of Article 123(2) EPC corresponding to the objection made by the Respondents under Article 100(c) EPC, and did not take any decision on the grounds of opposition under Article 100(a) and (b) EPC, the Board considers it appropriate to exercise the power conferred on it by Article 111(1) EPC to remit the case to the Opposition Division for further prosecution on the basis of the claims according to the third auxiliary request in order to enable the first instance to decide on the outstanding issues.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted for further prosecution to the opposition division on the basis of Auxiliary request III filed with the statement of grounds of appeal.

The Registrar

The Chairman

C. Rodríguez Rodríguez

P. Gryczka