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**Datasheet for the decision
of 3 July 2015**

Case Number: T 2219/12 - 3.3.06
Application Number: 07799165.1
Publication Number: 2049621
IPC: C10G25/00, B01J20/06,
B01J23/96, B01J8/02, C01B3/38,
C10G35/085, C10L3/08
Language of the proceedings: EN

Title of invention:

Reforming sulfur-containing hydrocarbons using a sulfur
resistant catalyst

Applicant:

BASF Catalysts LLC

Headword:

Sulfur resistant catalyst / BASF

Relevant legal provisions:

EPC Art. 84, 114(2)
RPBA Art. 13(1)

Keyword:

Admissibility (main request and first to third auxiliary request) : yes
Admissibility of the fourth auxiliary request : no -
unjustified submission in the oral proceedings / new request
not clearly allowable
Clarity (main request and first to third auxiliary request) :
no - terms "sulfur tolerant precious metal" and "non-
sulfating carrier" unclear

Decisions cited:

T 0586/97, T 1912/09, T 0005/10, T 1033/10, T 1869/10

Catchword:



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 2219/12 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 3 July 2015

Appellant:
(Applicant)

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Representative:

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted on 12 March 2012
refusing European patent application No.
07799165.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman E. Bendl
Members: L. Li Voti
C. Heath

Summary of Facts and Submissions

- I. This appeal lies from the decision of the Examining Division to refuse European patent application No. 07 799 165.1.
- II. In its decision, the Examining Division found that the subject-matter of claim 1 according to the then pending main request lacked novelty over the cited prior art and that the subject-matter of claim 1 according to the then pending first auxiliary request lacked inventive step.
- III. With the statement of the grounds of appeal of 18 July 2012 the Appellant filed three sets of amended claims to be considered as main request (hereinafter OLD MAIN), first auxiliary request (hereinafter OLD AUX1) and second auxiliary request (hereinafter OLD AUX2), respectively.

Claim 1 according to the OLD MAIN read as follows:

*"1. A method of reforming a sulfur containing hydrocarbon comprising:
contacting the sulfur containing hydrocarbon feed from a source with a first sulfur tolerant catalyst in a first chamber, said first sulfur tolerant catalyst consisting of a first sulfur tolerant precious metal and a first non-sulfating carrier so that the sulfur tolerant catalyst adsorbs at least a portion of sulfur comprised in the sulfur containing hydrocarbon feed and a first low sulfur reformat is collected; and
contacting the first sulfur tolerant catalyst with a first gas comprising oxygen to convert at least a portion of adsorbed sulfur to a sulfur oxide that is desorbed from the sulfur tolerant catalyst;*

wherein the non-sulfating carrier does not contain alumina."

Claim 1 according to the OLD AUX1 differed from claim 1 according to OLD MAIN insofar as it additionally required that *"the non-sulfating carrier contains at least one selected from the group consisting of silica, zirconia, and titania"*.

Claim 1 according to the OLD AUX2 differed from claim 1 according to OLD AUX1 insofar as it additionally required that *"the sulfur containing hydrocarbon feed contains steam"*.

- IV. The Board, in a communication pursuant to Article 15(1) RPBA dated 5 February 2015, cited additional documents and submitted its provisional opinion *inter alia* stating that the subject-matter of the claims according to all then pending requests appeared to lack clarity.
- V. The Appellant by letter of 3 June 2015 filed four amended sets of claims to be considered as main request, first auxiliary request, second auxiliary request and third auxiliary request, respectively, in replacement of the OLD MAIN, OLD AUX1 and OLD AUX2. The Appellant submitted also *inter alia* that the amended claims complied with the requirements of Article 84 EPC.

Claim 1 according to the main request reads as follows:

*"1. A method of reforming a sulfur containing hydrocarbon comprising:
contacting the sulfur containing hydrocarbon feed from a source with a first sulfur tolerant catalyst in a first chamber, said first sulfur tolerant catalyst*

consisting of a first sulfur tolerant precious metal and a first non-sulfating carrier so that the sulfur tolerant catalyst adsorbs at least a portion of sulfur comprised in the sulfur containing hydrocarbon feed and a first low sulfur reformat is collected; and contacting the first sulfur tolerant catalyst with a first gas comprising oxygen to convert at least a portion of adsorbed sulfur to a sulfur oxide that is desorbed from the sulfur tolerant catalyst; wherein the first non-sulfating carrier does not contain alumina, and wherein the first sulfur tolerant precious metal includes at least one of Pt, Pd, Rh, and Ir."

This claim differs from claim 1 according to OLD MAIN (see point III above) only insofar as the non-sulfating carrier which does not contain alumina has been indicated as "*the **first non-sulfating carrier***" at the end of the claim, and insofar as the first sulfur tolerant precious metal "***includes at least one of Pt, Pd, Rh, and Ir***" (emphasis added by the Board).

Claim 1 according to the first auxiliary request differs from claim 1 according to the main request insofar as it additionally requires that "*the first non-sulfating carrier **contains at least one selected from the group consisting of silica, zirconia, and titania***" (emphasis added by the Board), i.e. it comprises the additional feature already contained in claim 1 of OLD AUX1 (see point III above).

Claim 1 according to the second auxiliary request differs from claim 1 according to the first auxiliary request insofar as it additionally requires that "*the sulfur containing hydrocarbon feed contains steam*",

i.e. it comprises the additional feature already contained in OLD AUX2 (see point III above).

Claim 1 according to the third auxiliary request differs from claim 1 according to the second auxiliary request insofar as the last part of the claim does not read any longer "*wherein the first sulfur tolerant precious metal includes at least one of Pt, Pd, Rh, and Ir*" but "*wherein the first sulfur tolerant precious metal includes **Pt and Rh***" (emphasis added by the Board).

VI. Oral proceedings were held on 3 July 2015.

During oral proceedings the Appellant submitted a new set of claims labeled fourth auxiliary request after the Board had announced that each claim 1 according to the main request and the first to third auxiliary request lacked clarity.

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

"1. A method of reforming a sulfur containing hydrocarbon comprising:

contacting the sulfur containing hydrocarbon feed from a source with a sulfur tolerant catalyst in a chamber, said sulfur tolerant catalyst consisting of a sulfur tolerant precious metal and a non-sulfating carrier so that the sulfur tolerant catalyst adsorbs at least a portion of sulfur comprised in the sulfur containing hydrocarbon feed and a low sulfur reformat is collected; and
contacting the sulfur tolerant catalyst with a gas comprising oxygen to convert at least a portion of

*adsorbed sulfur to a sulfur oxide that is desorbed from the sulfur tolerant catalyst;
wherein the non-sulfating carrier consists of at least one selected from the group consisting of silica, zirconia, and titania;
and
wherein the sulfur tolerant precious metal consists of Pt and Rh."*

The Appellant then requested that the decision under appeal be set aside and that a patent be granted on the basis of the Main Request, or one of the First, Second or Third Auxiliary Request filed with letter dated 3 June 2015, or the Fourth Auxiliary Request filed during oral proceedings.

VII. The arguments of the Appellant of relevance to the present decision, submitted in writing and during oral proceedings, can be summarised as follows:

- The term "sulfur tolerant catalyst" did not intend to define the catalyst used in the claimed method in terms of a result to be achieved but it only designated the catalyst as being sulfur tolerant, in line with the technical problem to be solved by the invention. The characteristics of the so-called "sulfur tolerant catalyst" were positively defined in claim 1 by specifying that the catalyst consisted of one or more precious metals and a carrier not containing alumina. In this respect, the term "sulfur tolerant precious metal", used in claim 1, intended to designate the entire class of precious metals while the term "non-sulfating carrier" designated the entire class of carriers suitable for such precious metals wherein the sulfating carrier alumina was expressly excluded.

- In particular, claim 1 according to the main request was limited to the use of catalysts consisting of a combination of the sub-class of the precious metals, which required the presence of at least one of Pt (platinum), Pd (palladium), Rh (rhodium), and Ir (iridium), and of the sub-class of the carriers suitable for precious metals which did not comprise alumina. Moreover, claim 1 according to all the auxiliary requests concerned the use of catalysts comprising the more limited sub-class of carriers requiring the presence of at least one of silica, zirconia, and titania and not comprising alumina.

- The wording "sulfur tolerant precious metal" had thus to be understood as one or more precious metal(s) which is/are to be combined with a carrier other than alumina.

- Therefore, the wording of the claimed subject-matter would have been clear to the skilled person. The claims thus complied with the requirements of Article 84 EPC.

As regards the admissibility of the fourth auxiliary request, the Appellant submitted that

- It had assumed that the arguments submitted in writing by letter of 3 June 2015 as regards the clarity of the claims, which arguments had been substantially maintained and explained during oral proceedings, would have convinced the Board.

- However, during the discussion at the oral proceedings it appeared clear that this was not

the case and that it was necessary to file a new request.

- Therefore, only after realising that the Board did not accept the Appellant's arguments had it been possible to file an amended set of claims taking account of the Board's opinion.
- The amendments to claim 1 incorporated in the fourth auxiliary request intended thus to overcome all the outstanding clarity objections and were supported by the passages on page 9, lines 11 to 12 and 14 to 15 as well as page 10, lines 12 to 22 of the original description, reference being also made to the examples of the published international application WO 2008/008639 A2.
- The late filed fourth auxiliary request was thus in its view admissible.

Reasons for the Decision

1. Admissibility of the Appellant's main claim request and first, second and third auxiliary claim request.
 - 1.1 The main claim request and the first, second and third auxiliary claim requests were filed by the Appellant by letter of 3 June 2015 as a reply to the Board's communication pursuant to Article 15(1) RPBA dated 5 February 2015, wherein the Board (see point IV above) had cited additional documents and had submitted its provisional opinion that the subject-matter of the claims according to all the then pending requests, i.e. OLD MAIN, OLD AUX1 and OLD AUX2, *inter alia* lacked

clarity.

- 1.2 The Board thus considers the late filing of these requests to be justified in view of the Board's objections raised in said communication. Moreover, the amendments to the previous requests were straightforward and did not raise additional complex issues.
- 1.3 Therefore the Board decided to admit these requests into the proceedings (Article 13(1) RPBA).
2. Main Request - Clarity of claim 1
 - 2.1 Art. 84 EPC stipulates that the claims must be clear, concise and supported by the description. According to the established jurisprudence of the boards of appeal (see case Law of the Boards of Appeal of the EPO, 7th edition, 2013, II.A.3.2, page 252, first and second full paragraphs) this requirement has to be interpreted as meaning *inter alia* not only that a claim must be comprehensible from a technical point of view, but also that it must define the object of the invention by clearly indicating the essential features which are necessary for solving the technical problem of the invention and enabling to distinguish the invention from the prior art.
 - 2.2 The method of claim 1 according to the main request (see point V above) requires the step of contacting the sulfur containing hydrocarbon feed with a "sulfur tolerant catalyst" consisting of a "sulfur tolerant precious metal" which includes at least one of Pt, Pd, Rh, and Ir and a "non-sulfating carrier" which does not contain alumina.

With respect to claim 1 of the OLD MAIN, claim 1 at issue contains thus the additional feature that "*the first sulfur tolerant precious metal **includes at least one of Pt, Pd, Rh, and Ir.***".

The breadth of claim 1 is thus limited to the use of a sulfur tolerant catalyst comprising the sub-class of sulfur tolerant precious metals which includes necessarily at least one of Pt, Pd, Rh, Ir. However, this amendment does not exclude that other so-called "sulfur tolerant precious metals" can be contained in the sulfur tolerant catalyst in combination with at least one of Pt, Pd, Rh and Ir.

Therefore, in order to properly characterise the individual components of the sulfur tolerant catalyst, and consequently to overcome the objections raised by the Board in its communication of 5 February 2015, also any sulfur tolerant precious metals **other than** Pt, Pd, Rh and Ir intended to belong to the above mentioned sub-class have to be clearly defined.

- 2.3 In its provisional opinion with respect to the clarity of each claim 1 of the OLD MAIN, OLD AUX1 and OLD AUX2, expressed under point 4 (point IV above), the Board had stated *inter alia* the following:

"4.1.1 *It appears that there did not exist at the priority date of the present application any recognised standard for the tolerancy of a catalyst or of a precious metal towards sulfur. Moreover, it appears that it was well known that such tolerancy depends not only on the constituents of the catalysts (metals and/or carriers) but also on the selected catalytic reaction conditions in which the catalysts are used.*

*Therefore, considering **only the wording of the claims**, the terminology used in claims 1 at issue appears to be unclear and the precise extent of the claimed subject-matter cannot be determined..." ;*

*"4.1.3 As regards the wording "**sulfur tolerant** precious metal"...It is thus unclear if the present wording relates only to some specific precious metals, more sulfur tolerant than others, or actually to the whole precious metals class.*

Moreover, it is totally unclear how it is possible to distinguish between a sulfur tolerant precious metal as intended in the present invention and precious metals allegedly falling outside the scope of claim 1..."

- 2.3.1 It is undisputed that the description of the present application does not contain any precise definition for the wording "**sulfur tolerant** precious metal".

Moreover, it is also undisputed that at the priority date of the present application there did not exist any recognised standard for the tolerance of a catalyst or of a precious metal towards sulfur and that the present invention concerns the use of a "sulfur tolerant catalyst", i.e. a catalyst which has an acceptable tolerance towards sulfur so that it can be regenerated during the process (see page 9, lines 5 to 8 of WO 2008/008639 A2).

Therefore, in the Board's view, the skilled person, considering the aim of the invention, on a sound reading of claim 1 at issue, would have no reason to assume that the class of "sulfur tolerant precious metals" should encompass the whole class of precious metals, i.e. that the wording "sulfur tolerant precious

metals" in the present application should be understood to be equivalent to the wording "precious metals", as alleged by the Appellant.

To the contrary, considering that the claimed method requires the use of a "sulfur resistant catalyst" which has an acceptable tolerance towards sulfur so that it can be regenerated during the process, he would understand that the choice of the particular wording "sulfur resistant precious metal" intends to delimit a specific class of precious metals which, in combination with the carrier, form a catalyst which is "sulfur resistant" for the purpose of the invention.

- 2.3.2 Given the reasoning above it is readily apparent that the amendment contained in claim 1 at issue, not excluding the presence of "sulfur tolerant precious metals" other than Pt, Pd, Rh and Ir, still does not clarify which other precious metals can be considered to be "sulfur resistant" for the purpose of the invention.

The Board remarks in this respect that the present application (page 3, lines 9 to 12) clearly reports that even "*Reforming catalysts, and particularly those comprising platinum and most particularly comprising platinum and rhenium ... deactivate rapidly in the presence of sulfur compounds...*".

Therefore, in the absence of a recognised standard definition in the art for a "sulfur resistance precious metal" and of a clear limitation in the claim to specific precious metals, it remains unclear how the skilled person could determine which combinations of the precious metals reported specifically in claim 1, which include a not necessarily sulfur resistant

precious metal such as platinum, with other precious metals, which also may be not necessarily sulfur resistant (for example, rhenium), are to be considered part of the sub-class of "sulfur resistant precious metals" for the purpose of the invention, and which combinations are instead excluded.

2.3.3 Therefore, for the Board, the question whether a combination of precious metals falls within the scope of claim 1, depends exclusively on the label applied by the user to the term "sulfur tolerant", thereby rendering the meaning of that feature vague. Since this unclear technical feature prevents the skilled person from identifying the exact meaning thereof, the public is left in doubt as to which combinations of precious metals are covered by claim 1 and which are not, which is in contrast to the principle of legal certainty (see also T 586/97 of 14 September 2000, point 4.1.2.2).

2.4 As regards the clarity of the term "**non-sulfating** carrier" the Board had already remarked in writing in its communication of 5 February 2015 (point IV above) that

"4.1.4...also in this case it appears that there did not exist at the priority date of the present application any recognised standard definition for a so-called "non-sulfating" carrier.

Moreover, also other oxides like ZrO_2 , considered to fall under the scope of the claims (see page 9, line 15), appear to be able to react with sulfur compounds and to form the corresponding sulfates..."

2.4.1 The present application (page 9, lines 15 to 20) recites some suitable carriers and explains that

alumina, which is expressly excluded by the wording of claim 1, is a sulfating carrier. However, no indication is given about the precise breadth of the term "**non-sulfating** carrier".

According to the Appellant, the term "non-sulfating carrier" would only designate the sub-class of the carriers suitable for precious metals which does not comprise alumina. Therefore, claim 1 at issue would be directed to the use of catalysts which contain any suitable carrier material with the exception of alumina.

- 2.4.2 In the light of the considerations reported in point 2.4 above, the Board remarks that it remains unclear which other carriers, across the very large class of carriers suitable for precious metals, can be considered not to be able to react with sulfur compounds and to form the corresponding sulfates.

Also in this case, considering that at the priority date of the present application there did not exist any recognised standard definition for the term "non-sulfate carrier", on a sound reading of claim 1 at issue, the skilled person would have no reason to assume that the class of "non-sulfate carriers" is to be understood to encompass any carrier suitable for precious metals, i.e. it should be understood to be equivalent to the wording "carrier", as stated by the Appellant. To the contrary, he would understand that the mentioned class of carriers relates only to those carriers suitable to form, in combination with the sulfur tolerant precious metals, a catalyst which is sulfur tolerant for the purpose of the invention.

2.4.3 However, without a specific indication to this end in the claim, it remains unclear how the skilled person could determine which carriers are intended to be encompassed by the term "non-sulfating carriers" and are suitable for forming in combination with a precious metal, for example Pt, which, as explained above, is not always sulfur resistant, a catalyst which is sulfur resistant for the purpose of the invention and which carriers are instead excluded (with the exception of the expressly excluded alumina).

2.4.4 Hence whether a carrier falls within the scope of claim 1 depends exclusively on the label given by the user to the term "non-sulfating carrier", thereby rendering the meaning of that feature vague.

2.5 The Board thus concludes that claim 1 at issue does not define the object of the invention by indicating clearly the essential features which are necessary for solving the technical problem of the invention and enabling to distinguish the invention from the prior art.

Claim 1 thus lacks clarity (Article 84 EPC).

3. First auxiliary request - Clarity of claim 1

3.1 Claim 1 according to the first auxiliary request differs from claim 1 according to the main request insofar as it additionally specifies that "the first non-sulfating carrier contains at least one selected from the group consisting of silica, zirconia, and titania", i.e. the same amendment contained in OLD AUX1 (see points IV and V above).

3.2 This amendment, which was already contained in the claims considered by the Board to lack clarity in its communication of 5 February 2015, does not address the clarity deficiencies concerning the sub-class of "sulfur resistant precious metals" of claim 1 and is thus not apt to remove the deficiencies identified above (points 2.3 to 2.3.3).

3.3 Moreover, the limitation to the sub-class of non-sulfating carriers containing at least one of silica, zirconia and titania still does not clarify which other carrier materials are encompassed by the term "non-sulfating carrier" and are able to provide, in combination with the carriers specifically reported in claim 1, a catalyst which is sulfur resistant for the purpose of the invention and which combinations are instead excluded.

Therefore, this amendment is not apt to remove the clarity deficiencies identified above (points 2.4 to 2.4.4).

3.4 Claim 1 at issue thus lacks clarity (Article 84 EPC) for the same reasons as mentioned above.

4. Second auxiliary request - Clarity of claim 1

4.1 Claim 1 according to the second auxiliary request differs from claim 1 according to the first auxiliary request insofar as it additionally requires that "the sulfur containing hydrocarbon feed contains steam", i.e. the same amendment contained in OLD AUX2 (see points IV and V above).

4.2 This amendment thus does not concern the unclear terms "sulfur resistant precious metal" and "non-sulfating

carrier". Therefore, it is not able to remove the clarity deficiencies identified above (points 2.3 to 2.3.3 and 2.4 to 2.4.4 above).

4.3 Claim 1 at issue thus lacks clarity (Article 84 EPC) for the same reasons as mentioned above.

5. Third auxiliary request - Clarity of claim 1

5.1 Claim 1 according to the third auxiliary request differs from claim 1 according to the second auxiliary request insofar as the last sentence of the claim does not read any longer "*wherein the first sulfur tolerant precious metal includes at least one of Pt, Pd, Rh, and Ir*" but "*wherein the first sulfur tolerant precious metal includes **Pt and Rh***".

According to this claim, the sulfur tolerant precious metal component comprises necessarily at least two specific metals, Pt and Rh. However, the wording of the claim still does not clarify which other precious metals can be considered to fall within the class of "sulfur tolerant precious metals" and which combinations of these other precious metals with Pt and Rh have to be considered able to provide, in combination with a suitable carrier, a catalyst which is sulfur resistant for the purpose of the invention, and which other precious metals are instead excluded.

The clarity deficiencies identified above (points 2.3 to 2.3.4) thus apply also to claim 1 at issue.

Moreover, the characterization of the "non-sulfating carrier" of claim 1 at issue is the same as that in claim 1 according to the first auxiliary request.

Therefore, this amendment is also not suitable for removing the clarity deficiencies reported in points 3.1 to 3.3.

5.2 Claim 1 at issue thus lacks clarity (Article 84 EPC) for the same reasons as mentioned above.

6. Admissibility of the Appellant's fourth auxiliary request

6.1 The Appellant submitted a fourth auxiliary request during oral proceedings subsequent to the Board's announcement that the claims according to the preceding requests lacked clarity.

The only justification given for the late filing of this request was that the Appellant had assumed that it could convince the Board on its arguments regarding the clarity of the claims. As this ultimately was not the case, it became necessary to file an additional request taking into account the points discussed during oral proceedings.

6.2 According to Article 13(1) RPBA, any amendment to a party's case after filing its grounds of appeal may be admitted and considered at the Board's discretion. When applying the above cited procedural principle, the discretion to admit such a request has to be exercised in view of, *inter alia*, the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

In this respect, the state of the proceedings and the need for procedural economy taken together imply a requirement on a party to present appropriate requests as soon as possible if such requests are to be admitted

and considered (see T 1033/10 of 21 March 2013, point 5.5 of the reasons).

Moreover, new requests can be considered during oral proceedings only in exceptional cases, for example if a party is confronted with unexpected developments during the proceedings (see T 1869/10 of 17 April 2013, points 5.1 and 5.2 of the reasons) or if it would be immediately apparent to the Board, **with little or no investigative effort on its part**, that the new requests are clearly and obviously allowable (see T 5/10 of 5 April 2011, points 2.1 to 2.4 of the reasons and T 1912/09 of 16 January 2014, point 8.1 of the reasons).

- 6.2.1 In the light of the Board's communication of 5 February 2015, issued almost 5 months before oral proceedings, it should have been clear to the Appellant that there existed serious problems as regards the clarity of the claims and that the deficiencies mentioned there were at least potentially detrimental to the grant of a patent.

In fact, the Appellant by letter of 3 June 2015 submitted four sets of amended claims in reply to the Board's communication and explained in writing why, in its view, the claims as submitted were clear. At that stage, however, the Appellant decided not to file claims that would have clearly overcome the Board's concerns in case the Board could not be convinced by the Appellant's arguments. In other words, the Appellant relied on the strength of its arguments and made no provisions in the case the Board could not be convinced. The Appellant came into oral proceedings without a safety net, so to speak.

6.2.2 During oral proceedings, the Appellant was not confronted with any new argument or with an unexpected change of the Board's opinion. As explained above, the objections discussed in the oral proceedings were the same as the ones raised in the Board's communication dated 5 February 2015. Hence, the Appellant cannot be considered to have been taken by surprise by the decision of the Board that the claims according to main request and the first to third auxiliary requests lacked clarity.

Therefore, in the Board's view, already for this reason there is no justification for the filing of additional requests during oral proceedings.

In fact, further requests taking account of the Board's concerns could have been filed in writing well before oral proceedings.

6.2.3 For the Board, considering the state of the proceedings and the need for procedural economy taken together, the fourth auxiliary request, late filed during oral proceedings, cannot be considered admissible already on these grounds.

6.3 Nonetheless, the Board has examined whether the new late filed claim request could be considered to be clearly and obviously allowable.

6.3.1 Claim 1 according to the fourth auxiliary request is limited to the use in the claimed method of a "sulfur tolerant catalyst" consisting of a "sulfur tolerant precious metal" and a "non-sulfating carrier", wherein the "non-sulfating carrier" **consists of** at least one selected from the group consisting of silica, zirconia, and titania; and wherein the "sulfur tolerant precious

metal" **consists of** Pt and Rh (emphasis added by the Board).

Support for these amendments to claim 1 would be found, in the Appellant's view, in the passages on page 9, lines 11 to 12 and 14 to 15 as well as page 10, lines 12 to 22 of the original description, reference being also made to the examples of the published international application WO 2008/008639 A2.

6.3.2 The passage on page 9, lines 11 to 14 reads: "*The sulfur tolerant precious metal includes at least one of Pt, Pd, Rh and Ir, and the like. **In another embodiment the sulfur tolerant precious metal includes at least two of Pt, Pd, Rh and Ir.** Other catalytic metals or promoters may additionally be included.*" (emphasis added by the Board). Thus, this passage refers to several specific embodiments, only one of them being the combination of at least two of the listed precious metals. Given the fact that four specific metals are exemplified, several combinations of two (or more) precious metals are possible, only one of them being the combination of Pt with Rh.

6.3.3 The following lines 14 to 18 of the same page relate to carriers, which may contain, in addition to silica, zirconia and titania also other elements: "*Non-sulfating carriers **contain at least one of silica, zirconia, and titania.** Examples of non-sulfating carriers include or contain SiO₂, ZrO₂, SiO₂-ZrO₂, TiO₂, SiO₂-TiO₂, ZrO₂-TiO₂, **CeO-ZrO₂, LaO-ZrO₂, YO-ZrO₂, zeolite materials (alumino-silicates), combinations thereof, and the like.**" (emphasis added by the Board).*

6.3.4 Thus, the passages indicated by the Appellant, which are contained in the two passages referred to above, do

not appear to disclose directly and unambiguously the combination of Pt and Rh with a non-sulfating carrier **consisting of** at least one selected from the group consisting of silica, zirconia and titania, but rather represent separate lists of precious metals and carriers which may possibly be used in several different unspecified combinations in the claimed invention.

- 6.3.5 The other passage cited by the Appellant on page 10, lines 12 to 22 of the original application, reads "*The sulfur tolerant catalyst is made by contacting and/or mixing the sulfur tolerant precious metal and the non-sulfating carrier. For example, the sulfur tolerant catalyst may be made by contacting a non-sulfating carrier with a solution containing platinum and rhodium. Alternatively, the sulfur tolerant catalyst may be made by contacting a non-sulfating carrier with a first solution of a first sulfur tolerant precious metal such as platinum, followed by or simultaneously contacting the non-sulfating carrier with a second solution of a second sulfur tolerant precious metal such as rhodium (and/or a third solution with a third sulfur tolerant precious metal). The solution of sulfur tolerant precious metal may contain one or more sulfur tolerant precious metals, or two or more sulfur tolerant precious metals.*" (emphasis added by the Board).

This passage relates in particular to the preparation of a catalyst comprising, as example, the combination of precious metals Pt and Rh, but not excluding the possible presence of other precious metals, and without defining a specific carrier to be used.

6.3.6 Even considering the illustrative examples it is undisputed that the application as originally filed, though containing one example of a specific catalyst falling within the scope of the amended claim 1, i.e. Pt,Rh/SiO₂/ZrO₂ (the combination of platinum and rhodium on a **specific** mixed silica and zirconia carrier), does not contain any disclosure corresponding to the **more generic** sulfur resistant catalyst consisting of the combination of features indicated in claim 1 at issue.

Therefore, in the light of the support indicated by the Appellant for these amendments, it is not at first sight apparent that the amended claim 1 complies with the requirements of Article 123(2) EPC.

6.3.7 Hence, with little or no investigative effort on its part it is not immediately apparent to the Board, that the new claim request is clearly and obviously allowable.

6.4 The Board thus decided not to admit this request into the proceedings (Articles 114(2) EPC and Article 13(1) RPBA).

6.5 With no claim request on file that could meet the requirements of the EPC, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Magliano

E. Bendl

Decision electronically authenticated