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**Datasheet for the decision
of 11 March 2025**

Case Number: T 0969/22 - 3.3.10

Application Number: 18736760.2

Publication Number: 3395792

IPC: C07C41/06, C07C41/42, C07C43/04

Language of the proceedings: EN

Title of invention:
METHOD FOR PRODUCING METHYL TERTIARY-BUTYL ETHER

Patent Proprietor:
LG Chem, Ltd.

Opponent:
Evonik Operations GmbH

Headword:

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

Keyword:
Amendments - allowable (yes)
Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 0969/22 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 11 March 2025

Appellant: Evonik Operations GmbH
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 February 2022 concerning maintenance of the
European Patent No. 3395792 in amended form.**

Composition of the Board:

Chairman P. Gryczka
Members: A. Zellner
 L. Basterreix

Summary of Facts and Submissions

- I. The opponent lodged an appeal against the decision of the opposition division to maintain the European patent No. 3 395 792 in amended form (Article 101(3) (a) EPC).
- II. Notice of opposition has been filed on the basis of Articles 100(a) EPC for lack of inventive step (Article 56 EPC) and of Article 100(b) EPC for lack of sufficiency of disclosure.
- III. During the opposition proceedings the patent proprietor defended its patent in amended form. In the appealed decision the opposition division held that the main request did not meet the requirements of Article 123(3) EPC, and that auxiliary request 1 met the requirements of Articles 123(2) and (3), 83 and 56 EPC.
- IV. The opponent appealed this decision and argued that the opposition division erred when holding claim 1 of the patent as maintained (auxiliary request 1 in the opposition proceedings) to meet the requirements of Article 123(2) EPC, and when holding the claimed method to be based on an inventive step (Article 56 EPC).
- V. The following documents are referred to:
- D1: EP 0 071 238 B1
 - D2: US 2007/0203369 A1
 - D3: EP 1 199 296 A1
 - D4: DE 10 2006 057 856 A1
 - D5: WO 2004/007412 A1
 - D6: Simulationen zu EP 3 395 792 B1,
eingereicht am 3 June 2020
 - D8: EP 3 546 440

D9: US 2017/0166497 A1

VI. Claim 1 is the only independent claim of the main request. It has the following wording (additions and ~~deletions~~ with respect to claim 1 as filed are highlighted by the board):

"A method of preparing methyl tert-butyl ether, the method comprising:

a reaction step of reacting methanol with iso-butene in presence of an acid catalyst to generate methyl tert-butyl ether; and

a purification step of purify the reaction product obtained by the reaction step by introducing the reaction product into a reaction distillation column comprising a packing stage containing an acid catalyst,

wherein the reaction step is performed in a first reaction part comprising one reactor or two or more reactors connected in parallel; wherein a total volume of the one or more reactors included in the first reaction part is greater than 30 m³; and in a second reaction part comprising one or more reactors connected in series to the first reaction part,

wherein a portion of a reaction product discharged from the first reaction part is recycled in the first reaction part,

~~wherein a flow ratio of a recycle to a fresh feed is greater than 0.9 and less than 1.7 when a total volume of the one or more reactors comprised in the first reaction part is 30 m³ or less, a flow ratio of a recycle to a fresh feed is greater than 2.2 and less~~

than 4.8 when a total volume of the one or more reactors comprised in the first reaction part is greater than 30 m³ and 60 m³ or less, and a flow ratio of a recycle to a fresh feed is greater than 3.1 and less than 9.8 when a total volume of the one or more reactors comprised in the first reaction part is greater than 60 m³."

- VII. The board issued a communication with their preliminary opinion on the legal and factual issues of the case.
- VIII. Oral proceedings were held on 11 March 2025. At the end of the oral proceedings, the decision was announced.
- IX. The appellant's arguments can be summarised as follows:

Amended claim 1 of the patent in amended form has no basis in the application as filed. In particular, there is no basis for a limitation of the size of the one or more reactor(s) used in the reaction step to a total volume of greater than 30 m³. The added feature defining such a reactor size is not disclosed in the application as filed. As a consequence, the request does not meet the requirements of Article 123(2) EPC. The main request is also not allowable because the provision of the claimed method is not based on an inventive step in view of the disclosure of document D1 as closest prior art. The differing feature between the claimed method and the method disclosed in D1 is the size of the reactor(s) used in the reaction step. No technical effect can be attributed to this feature, and the objective technical problem which has effectively been solved is thus the provision of an alternative method. The selection of a reactor size of greater than 30 m³ is obvious for the skilled person. The request does therefore not meet the requirements of Article 56

EPC.

- X. The respondent's arguments can be summarised as follows:

Claim 1 of the main request finds a basis in the application as filed, which discloses the use of one or more reactor(s) used in the reaction step of the claimed method of preparing methyl tert-butyl ether. According to the size of the reactor(s) used, a specific flow ratio of a portion of the reaction product, which is recycled in the first reaction part, to fresh feed is to be adhered to. The application as filed discloses three different ranges for the reactor size(s) with corresponding flow ratios. In amended claim 1 the alternative using the smallest reactor size (30 m³ or less) disclosed in the application as filed has been deleted, leaving the remaining two originally disclosed options. The claimed method is also based on an inventive step. Document D1 represents the closest prior art. The claimed method differs from the method disclosed therein in that the reactor(s) used in the first step of the method is greater than 30 m³. The combination of a specific reactor size with a correspondingly selected flow ratio of recycle to fresh feed leads to an improved process, as shown in table 1 of the contested patent. In particular, the thermal energy use of the claimed method is reduced. The prior art does not suggest the claimed combination of reactor size and recycle to fresh feed flow ratio in order to improve the thermal energy use of the method disclosed in document D1.

- XI. The appellant (opponent) requests that the decision under appeal be set aside and that the patent be revoked. The appellant furthermore requests that

auxiliary requests 7 and 8 not be admitted into the appeal proceedings.

- XII. The respondent (patent proprietor) requests that the appeal be dismissed and the patent be maintained as maintained by the opposition division (main request). As an auxiliary measure, the respondent requests that the case be remitted to the opposition division for further prosecution on the basis of auxiliary requests 1 to 9 filed with the reply to the statement setting out the grounds of appeal, or that a patent be maintained on the basis of these auxiliary requests. The respondent further requests that documents D8 and D9 not be admitted into the appeal proceedings. The respondent also requests that the appellant's arguments concerning the auxiliary request submitted in its letter dated 10 January 2023 not be admitted into the proceedings.

Reasons for the Decision

1. The appeal is admissible.

Main request (patent as maintained by the opposition division)

Amendments (Article 123(2) EPC)

2. Claim 1 of the main request differs from claim 1 as filed (see point VI. of this decision) by the deletion of the feature:

"... a flow ratio of a recycle to a fresh feed is greater than 0.9 and less than 1.7 when a total volume of the one or more reactors comprised in the first reaction part is 30 m³ or less, ..."

and by the addition of the feature:

"... wherein a total volume of the one or more reactors included in the first reaction part is greater than 30 m³; ..."

3. The appellant submitted that the amended claim was not based on the application as filed due to the addition of the feature *"... wherein a total volume of the one or more reactors included in the first reaction part is greater than 30 m³; ..."*. The appellant argued that the core of the alleged invention as filed did not relate to a process wherein the total volume of the one or more reactor included in the first reaction part was limited to more than 30 m³. According to the appellant, the aim of the alleged invention was, according to paragraphs [0005] and [0006] of the application as filed, to reduce the amount of thermal energy in the distillation step which followed the reaction step. This energy reduction could, however, not be achieved by restricting the size of the reactor(s) used in the reaction step to more than 30 m³. On the contrary, a reduction of energetic input was achieved, as disclosed in paragraphs [0009] and [0011] as well as claim 1 as filed, by the reduction of unreacted isobutene rather than by an increase in reactor volume. Furthermore, the alleged invention was to provide a process wherein a specific recycle-to-feed ratio was to be maintained for a particular reactor volume. This was supported by paragraphs [0041] to [0043], [0049] to [0052] as well as example 5 of the patent as filed. According to the appellant, the choice of a particular reactor volume greater than 30 m³ could neither solve the technical problem intended to be solved by the alleged invention, nor was it disclosed in example 5. As a result, the amendment could not be based on the application as

filed.

4. The respondent, by reference to claim 1 as granted and to paragraphs [0036] to [0039] of the description as filed and in agreement with the opposition division, submitted that amended claim 1 met the requirements of Article 123(2) EPC. The respondent argued that the limitation of the reactor volume to more than 30 m³ was not in conflict with thermal energy savings, as alleged by the appellant. Also, although the application as filed disclosed in paragraphs [0041] to [0043] and [0049] to [0052] preferred reactor sizes of 25 m³, part of these disclosures referred to embodiments with more than one reactor in the first reaction part. The respondent furthermore pointed out that example 5 as filed was not according to claim 1 of the main request, and had been amended accordingly during the opposition proceedings. The respondent concluded that amended claim 1 was the result of a limitation of claim 1 as filed to two out of the three alternative methods which were disclosed in the application as filed.
5. The board comes to the following conclusions (reference is made to the application as published in accordance with Article 153(4) EPC, EP 3 395 792 A1):
 - 5.1 The parties agreed that the application as filed does not contain a literal disclosure of the contested feature "*... wherein a total volume of the one or more reactors included in the first reaction part is greater than 30 m³ ...*".
 - 5.2 The parties disagreed whether the addition of this feature into claim 1 may nevertheless meet the requirements of Article 123(2) EPC.

5.3 The board comes to the conclusion that this is the case. Claim 1 as filed is directed to a method of preparing methyl tert-butyl ether. The method comprises two steps, *i.e.* a reaction step and a purification step. The reaction step is performed in a first reaction part comprising one reactor or two or more reactors connected in parallel. A portion of a reaction product discharged from the first reaction part is recycled in the first reaction part. The flow ratio of a recycle to a fresh feed depends on the total volume of the one or more reactors comprised in the first reaction part. This flow ratio is:

- (a) greater than 0.9 and less than 1.7 when a total volume of the one or more reactors comprised in the first reaction part is 30 m³ or less,
- (b) greater than 2.2 and less than 4.8 when a total volume of the one or more reactors comprised in the first reaction part is greater than 30 m³ and 60 m³ or less,
- (c) greater than 3.1 and less than 9.8 when a total volume of the one or more reactors comprised in the first reaction part is greater than 60 m³.

5.4 According to claim 1 as filed, the first step of the claimed method can thus be performed in one reactor, or two or more reactors in parallel, wherein the total volume thereof can be of any size. However, for specific ranges of total reactor volume - the borders thereof being defined in the claim - specific flow ratios have to be adhered to. These corresponding

ranges of ratios are as defined in claim 1.

5.5 Claim 1 of the main request has been amended by deleting the option that the flow ratio is greater than 0.9 and less than 1.7 when a total volume of the one or more reactors comprised in the first reaction part is 30 m³ or less. The remaining part of the claim defines the correlation between reactor sizes of between greater than 30 m³ and 60 m³, and of greater than 60 m³, and the corresponding flow ratios. This part of the claim is identical to claim 1 as filed. It is also disclosed in paragraphs [0036] to [0039] as filed.

5.6 Removal of the deleted part as such, *i.e.* the method for preparing methyl tert-butyl ether wherein the first reaction step is performed in (a) reactor(s) with a total volume of 30 m³ or less, would lead to a claim wherein the reaction step could be carried out in (a) reactor(s) with a total volume of 30 m³ or less, but without the corresponding flow ratio according to claim 1 as filed. Such a claim would not find a basis in the application as filed, because of the removal of the correlation between reactor size and flow ratio. Only the additional feature "*... wherein a total volume of the one or more reactors included in the first reaction part is greater than 30 m³ ...*" re-establishes that claim 1 as filed is amended by only removing one of the three options for the volume of the reactor(s) of the reaction step.

5.7 Claim 1 of the main request is thus limited to two of the three options of claim 1 as filed. Since the two remaining options are disclosed therein, the method according to claim 1 of the main request has not been amended without basis in the application as filed.

5.8 The appellant referred to example 5 of the application as filed. It is correct that this example discloses a method for preparing methyl tert-butyl ether wherein the reactor size of the only reactor used in the first reaction step is outside the scope of claim 1 of the main request, *i.e.* it has a volume of 30 m³. However, as submitted by the respondent, this example has been amended during the opposition proceedings as being comparative. Even if the example was within the scope of claim 1 as filed, the appellant's argumentation does not support the conclusion that (amended) claim 1 contains subject-matter which extends beyond the content of the application as filed. The same applies with respect to the disclosure of paragraphs [0041] and [0050] of the application as filed.

5.9 The appellant also argued that the general idea of the alleged invention was not related to the volume of the reactor(s) in the first reaction part as such, but to the establishment of a flow ratio of a recycle to a fresh feed, dependent on reactor volume. This argument, however, is not relevant for the question whether claim 1 of the main request finds a basis in the application as filed. In addition, it is the addition of the contested feature which ensures that the amended claim reflects the idea referred to by the appellant.

6. The board concludes, for these reasons, that the main request meets the requirements of Article 123(2) EPC.

Inventive step (Article 56 EPC)

7. The opposition division came to the conclusion that the prior art documents on file did not render the claimed subject-matter obvious. The opposition division considered - in agreement with the parties - the

disclosure of document D1 to be the closest prior art, and the differing features to be (i) the reactor size in the reaction step, and (ii) that the purification step required a reaction distillation column. According to the opposition division, the different size of the reactor used in the reaction step led to a decrease in the use of thermal energy. The technical problem was seen in the provision of a method of preparing methyl tert-butyl ether capable of reducing the amount of thermal energy by reducing the amount of unreacted isobutene and the amount of impurities. The claimed solution was not considered obvious, taking into account document D1 itself, or any of documents D2 to D6. The opposition division also concluded that the ASPEN simulations disclosed in document D6 could not be relied upon for supporting the appellant's argument that the technical problem stated above was not effectively solved over the whole scope of the claim. The opposition division did not consider the differing feature (ii) to contribute to inventive step.

8. The appellant contested the opposition division's conclusion and argued that the technical effect acknowledged by the opposition division was not caused by differing feature (i), *i.e.* the difference in reactor size, at least not over the whole scope of claim 1. According to the appellant, the technical effect identified by the opposition division was rather based on the recycle-to-feed ratio. The appellant added that it had not been shown, in particular not by comparing examples 1 to 4 with example 5 of the contested patent, that a technical effect was caused by the reactor size alone. It was also not plausible to assume that a bigger reactor size would lead to reduced energy consumption. The appellant furthermore argued, by reference to documents D8 and D9, that ASPEN

simulations were reliable and that the disclosure of D6 thus had to be taken into account. According to the appellant, this document disclosed, in particular in figure 2, that the reaction of isobutene was highly dependent on reaction temperature, and that the general conclusions drawn from figure 4 of the disputed patent were not correct. On the contrary, the conversion of isobutene was even lower at an elevated reaction temperature of more than 42 °C, contrary to the conclusion drawn by the opposition division. As a result, the technical effect relied upon by the opposition division was merely present for a particular temperature and methanol-to-isobutene ratio, but not over the whole claimed scope. The appellant concluded that the objective technical problem was merely the provision of an alternative method for the preparation of methyl tert-butyl ether. Since the selection of a reactor volume and the use of a reaction distillation column were either obvious measures for the person skilled in the art, or known from documents D2 to D5, inventive step could not be acknowledged.

9. The respondent also considered document D1 to be the closest prior art and the differing features to be those identified by the opposition division. According to the respondent, the contested patent disclosed in table 1 that thermal energy savings were higher for reactor systems according to claim 1 of the main request. This effect was caused by the difference of reactor size, as shown by a comparison of examples 1 to 4 with example 5. The respondent argued that, due to the characteristics of the process, thermal energy consumption was an indicator for unreacted isobutene and the amount of impurities, and thus for the conversion rate. The respondent furthermore submitted that neither document D8 nor D9 were prior art

according to Article 54(3) EPC, and that their content could thus not be considered for the assessment of inventive step. Since they were also late filed, they should not even be admitted into the appeal proceedings. The respondent argued, by reference to the disclosure of documents D2 and D4, that the use of ASPEN simulations were not reliable, and concluded that the appellant's arguments based on document D6 were thus not convincing, and that simulations in general would not guarantee for the actual results which could be obtained for a real chemical process. The technical effect relied upon in the impugned decision was to be acknowledged. The respondent further argued that none of documents D2 to D5 suggested to implement the differing features into the process disclosed in document D1, in particular not while at the same time maintaining the recycle ratio disclosed therein. The method according to claim 1 of the main request was thus based on an inventive step. The respondent also argued that the appellant's arguments based on certain figures of document D1 were brought forward for the first time during the oral proceedings before the board and should thus not be taken into consideration.

10. The board comes to the following conclusions:

The contested patent

10.1 The patent in dispute relates to a method for preparing methyl tert-butyl ether, which is produced by the reaction of iso-butene-type olefins with methanol. The patent addresses the problem of high energy consumption due to the necessity of using a distillation column at the rear end of the reactor. According to paragraphs [0007] and [0010] of the description, a reduction of thermal energy consumption can be achieved by reducing

the amount of unreacted iso-butene and the amount of impurities contained in the reactor. Claim 1 of the main request is directed to a method for preparing methyl tert-butyl ether comprising a reaction step and a purification step. The reaction step is performed in (a) reactor(s) and part of the reaction product is recycled, wherein the flow ratio of recycle to fresh feed is set in relation to the reactor size.

The closest prior art

- 10.2 The parties concurred with the opposition division that document D1 is the closest prior art. The board sees no reason to differ. Document D1 also relates to the production of methyl-tert-butyl ether from isobutylene and mentions the problems associated with the formation of by-products (see column 1, lines 40 to 50).

The differing technical features

- 10.3 The parties also agreed that the claimed method differs from the method disclosed in document D1 in the reactor size of the reactor(s) of the first part of the reaction step - which is greater than 30 m³ according to claim 1 of the main request - and in that the reaction product of the reaction step is introduced in the purification step into a reaction distillation column. Document D1 discloses the results obtained using pilot plant scale etherization reactions (see column 4, lines 61 to 65 and column 5, lines 1 to 5). Document D1 only mentions distillation in the purification step, but not the use of a reaction distillation column (see Figure 10 and reference to feature 10 thereof in column 10, lines 13 to 14). Document D1 furthermore discloses a recycle ratio of 2 to 6 (column 2, lines 44 to 45). The board sees no

reason to deviate from the parties' assessment.

The technical problem

- 10.4 The parties disagreed whether the differing features led to a particular technical effect and which technical problem had been solved by the claimed method.
- 10.5 The board observes the following:
- 10.5.1 The description of the patent in suit discloses in table 1 experimental results for examples 1 to 5 and comparative examples 1 to 6.
- 10.5.2 Examples 1 to 4 disclose methods wherein the reaction step is performed in reactors of a total volume of greater than 30 m³ (examples 1 and 2: 60 m³, examples 3 and 4: 90 m³), and with the corresponding flow ratios according to claim 1 (examples 1 and 2: 2.6 and 3.1, respectively, for the total size of the reactors of greater than 30 m³ and 60 m³ or less; examples 3 and 4: 4.8 and 6.2, respectively, for the total size of the reactors of greater than 60 m³). Examples 1 to 4 are thus according to claim 1 of the main request.
- 10.5.3 Example 5 and comparative examples 1 to 6 are not according to claim 1, because either the total size of the reactors used in the reaction step is not greater than 30 m³ (example 5 and comparative examples 5 and 6), or because the flow ratio is not within the ranges for the respective reactor sizes (comparative examples 1 to 4).
- 10.5.4 According to table 1, the thermal energy use amount is smaller for the examples according to claim 1 (examples

1 to 4: from 0.88 to 0.94) than for those which are not according to claim 1 (example 5 and comparative examples 1 to 6: from 1.00 to 1.06). The board notes that the flow rate in the examples disclosed in table 1 is within the range disclosed in document D1 (see column 2, lines 44 to 45).

10.5.5 These examples thus show that a method, wherein the total size of the reactor(s) used in the reaction step in combination with the specific respective flow rate is according to claim 1 of the main request, requires a lower amount of thermal energy use when compared to a method wherein either the reactor size is smaller, or wherein the combination of reactor size and flow rate is not according to claim 1.

10.5.6 The appellant submitted that example 5 of the contested patent was - due to the difference in reactor size - not corresponding to the closest prior art. The appellant also submitted that examples 1 to 4 of table 1 differed from example 5 not only in reactor volume, but also in recycle to feed ratio, and in the reflux ratio. The appellant concluded that it was therefore not credible that a technical effect was only caused by the difference in reactor volume.

10.5.7 The board disagrees. Although it is correct that the reactor size according to all of examples 1 to 5 of the patent in dispute differ from the size of the reactor used in D1, the comparison within table 1 shows that a different reactor size in combination with a corresponding flow rate leads to a difference in the amount of thermal energy used, and that a reactor of 30 m³ results in a higher thermal energy use than bigger reactor(s). Although the appellant argued that this observation could not be transferred with respect

to the disclosure of D1, the board sees no reason why this should not be the case.

10.6 The appellant also argued that there were additional differences between examples 1 to 5 of table 1, and that a particular technical effect may thus not be due to the difference in reactor size and flow ratio. Any technical effect was the result of a multifunctional system, and could not be attributed to a single feature, such as reactor volume. The board notes, as explained above, that a technical effect can however be attributed to the sole combination of a specific reactor volume and the corresponding flow rate. Whether additional features also contribute to a technical effect does not contradict this finding. The board also follows the respondent's argumentation that the lower reflux ratio of the reaction distillation column, as disclosed for examples 1 to 4 in table 1 of the contested patent, is not a further differing feature contributing to a technical effect, but a consequence of a lower thermal energy use, because the reflux ratio can be reduced due to sufficient separation of by-products which is already achieved by the lower thermal energy use.

10.7 Concerning the relevance of the simulations disclosed in document D6, the board comes to the conclusion that the results obtained with the help of a simulation programme such as ASPEN may not, as a matter of principle, be dismissed.

10.8 The board is, however, not convinced by the appellant's conclusions drawn from document D6. The appellant argued, in particular by reference to figure 2 of D6, that a decrease in the conversion of isobutene - as disclosed in figure 4 of the contested patent - could

not be observed for all reaction temperatures. Although the conversion decreased with an increase of the flow ratio of recycle to a fresh feed for a temperature up to 37°C, this relation did not hold true at temperatures of 42 to 47°C. According to the appellant, this was also disclosed in figure 2 of document D1. This temperature influence, however, was not taken into account in the contested patent. The same applied for the ratio of methanol to isobutene, as disclosed in figure 8 of D1, and the liquid hourly space velocity, *i.e.* the rate at which feed was added to the reactor. At least these factors also had an influence on the energy consumption. The board notes, however, that these arguments cannot contradict that the technical effect the respondent's arguments relied on is caused by the differing feature identified above. The board also notes, and this has not been contested by the appellant, that the temperature at which the experiments according to the contested patent were run appear to be common for the reaction under consideration. It can thus be concluded that the technical effect relied upon by the respondent can be achieved when working within customary temperature conditions.

- 10.9 The objective technical is, for these reasons, the provision of an improved method for preparing methyl tert-butyl ether, the improvement being a reduced thermal energy consumption.

The solution according to claim 1 of the main request

- 10.10 According to claim 1 of the main request, this problem is solved by the provision of a method for preparing methyl tert-butyl ether comprising a reaction step and a purification step, wherein the total volume of the

reactor in the first reaction part is greater than 30 m³, and the flow ratio of the portion of the reaction product being recycled into the first reaction part to fresh feed depends on the reactor size and is greater than 2.2 and less than 4.8 if the reactor size is greater than 30 m³ and 60 m³ or less, and is greater than 3.1 and less than 9.8 if the reactor size is greater than 60 m³.

- 10.11 The board is satisfied that the suggested solution according to claim 1 of the main request solves the technical problem (see table 1 of the patent in dispute).

Inventiveness of the claimed solution

- 10.12 Document D1 does not disclose or suggest that a low thermal energy use can be achieved when the size of the reactor(s) used in the reaction step of a method for preparing methyl tert-butyl ether is selected depending on the flow ratio of the portion of the reaction product being recycled into the first reaction part (the recycle) to fresh feed. Although the reactor size(s) as such may be known to the person skilled in the art, the appellant did not refer to any teaching in the cited documents that a specific reactor size has to be combined with a specific flow ratio of a recycle to a fresh feed into the first reaction part.
11. For these reasons, the board comes to the conclusion that claim 1 of the main request meets the requirements of Article 56 EPC.

Auxiliary requests

12. Since the main request is allowable, there is no need to take a decision on the auxiliary requests.

Admission of documents D8 and D9

13. The present decision is taken without consideration of the content of documents D8 and D9, since the board came to the conclusion that results obtained with the help of a simulation programme such as ASPEN may not, as a matter of principle, be dismissed and that the disclosure of document D6 is to be taken into account (see point 10.7 of this decision). A decision on their admission is thus not necessary.

Conclusion

14. In summary, the board comes to the conclusion that the reasons brought forward by the appellant do not prejudice the maintenance of the patent as maintained by the opposition division.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated