

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**D E C I S I O N**  
**of 11 October 2005**

**Case Number:** T 0576/03 - 3.3.06

**Application Number:** 95305724.7

**Publication Number:** 707057

**IPC:** C10G 45/58

**Language of the proceedings:** EN

**Title of invention:**

Carbon dioxide addition in hydrocracking/hydroisomerization processes to control methane production

**Patentee:**

ExxonMobil Research and Engineering Company

**Opponent:**

Chevron U.S.A. Inc.

**Headword:**

Hydroisomerization/EXXON

**Relevant legal provisions:**

EPC Art. 111(1), 123(3)  
EPC R. 67

**Keyword:**

"Extension of protection - yes"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0576/03 - 3.3.06

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.06  
of 11 October 2005

**Appellant:** ExxonMobil Research and Engineering Company  
(Proprietor of the patent) 1545 Route 22 East  
Clinton Township  
Annandale, NJ 08801 (US)

**Representative:** Troch, Geneviève  
ExxonMobil Chemical Europe Inc.  
P.O. Box 105  
B-1830 Machelen (BE)

**Respondent:** Chevron U.S.A. Inc.  
(Opponent) 2613 Camino Ramon  
San Ramon, CA 94583-4289 (US)

**Representative:** Nash, David Allan  
HASELTINE LAKE  
Redcliff Quay  
120 Redcliff Street  
Bristol BS1 6HU (GB)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 19 March 2003  
revoking European patent No. 707057 pursuant to  
Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** P. Krasa  
**Members:** G. Dischinger-Höppler  
U. Tronser

## Summary of Facts and Submissions

I. European patent No. 0 707 057 was granted on the basis of 11 claims of which the sole independent claim reads:

"1. A process for suppressing CH<sub>4</sub> yield in the hydroisomerization of C<sub>5+</sub> paraffinic feed which comprises contacting the feed at hydroisomerization conditions with a catalyst comprising a non-noble Group VIII metal component and a Group VI metal component supported on alumina or silica-alumina and in the presence of hydrogen and at least 0.2 mole % carbon dioxide based on feed."

II. A notice of opposition had been filed against the granted patent, wherein the Opponent sought revocation of the patent on the grounds of Article 100(c) EPC due to extension beyond the content of the application as filed and on the grounds of Article 100(a) EPC due to lack of novelty and lack of inventive step (Articles 52(1), 54(2) and 56 EPC). Amongst others, the opposition was based on document

D2: EP-A-0 635 557.

A ground of opposition under Article 100(b) EPC due to insufficient disclosure had been raised for the first time during oral proceedings before the Opposition Division on 7 March 2003.

III. In its decision, which was based on amended sets of claims according to a main request and an auxiliary request, the Opposition Division held that the amendments made to the claims of the main request did

not fulfil the requirements set out in Article 123(2) EPC. Concerning the auxiliary request, the Opposition Division held that the invention claimed therein was not sufficiently disclosed and that the insufficiency could not be remedied by amendment.

- IV. This decision was appealed by the Patent Proprietor (hereinafter Appellant) who filed during the appeal proceedings several amended sets of claims on the basis of which remittal of the case to the first instance for further prosecution was requested. The Appellant also requested in writing that the Board should consider whether there has been a substantial procedural violation by the Opposition Division which would justify reimbursement of the appeal fee. The Opponent (hereinafter Respondent) filed submissions in reply.
- V. Upon discussion during the oral proceedings held before the Board on 11 October 2005 of an objection raised by the Respondent under Article 84 EPC against any version of Claim 1 on which the then pending requests were based, the Appellant replaced all the previous claims by a single new set (Set H, designated main request) of amended claims.

Claim 1 thereof differs from that of Claim 1 as granted in that the feature "C<sub>5+</sub> paraffinic feed" has been replaced by "Fischer-Tropsch feed boiling above 350°F (177°C),".

Claims 2 to 10 correspond to granted claims 2 to 10 and refer to preferred embodiments of the process of Claim 1. Granted Claim 11 has been deleted.

A request for remittal of the case on the basis of Set H was not submitted.

- VI. The Appellant, in essence, submitted that the amendments made to the claims were allowable under Articles 123 and 84 EPC and that the claimed subject-matter was sufficiently disclosed. Amongst others, it was argued that the amendments made to Claim 1 did not extend beyond the protection conferred by the patent since a Fischer-Tropsch (FT) feed boiling above 350°F was a fraction of a C<sub>5+</sub> paraffinic feed as was evident from D2.
- VII. The Respondent, *inter alia*, argued that the amendments made to Claim 1 of Set H were not allowable under Article 123(3) EPC since the presence of pentane was required in the feed according to Claim 1 as granted but no longer mandatory in the feed boiling above 350°F according to the amended version.
- VIII. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims 1 to 10 according to claim Set H (designated "main request") submitted during the oral proceedings.

The Respondent requested that the appeal be dismissed.

## Reasons for the Decision

### 1. *Article 123(3) EPC*

Article 123(3) EPC prohibits amendments to granted claims in such a way as to extend the protection conferred by a European patent.

1.1 Claim 1 as granted is directed to "a process for ... hydroisomerization of C<sub>5+</sub> paraffinic feed" whereas Claim 1 in the amended form relates to "a process for ... hydroisomerization of FT feed boiling above 350°F (177°C)".

1.2 In order to answer the question of whether this amendment is contrary to the provisions of Article 123(3) EPC, it is necessary to determine the extent of protection conferred by the patent as granted against the protection conferred by the patent in the amended form.

1.2.1 It is undisputed that C<sub>5</sub> paraffins (pentanes) have a boiling point of below 40°C at atmospheric pressure (36.1°C for pentane). However, the Appellant argued that the term "C<sub>5+</sub>" indicated in the particular technical field of hydrocarbons a paraffinic fraction of hydrocarbons having 5 and more carbon atoms, in the sense that it covers also fractions which consist of hydrocarbons having not less than e.g. 10 carbon atoms so that C<sub>5</sub> to C<sub>9</sub> (pentanes to nonanes) need not be present.

The Board does not accept this argument since it is common general technical knowledge in the art that the

fractions of a paraffinic product are identified via the carbon number(s) of the hydrocarbon(s) contained and/or the respective initial boiling point (IBP) or boiling point range. This is also apparent from the patent in suit, where the fractions of the product are identified as C<sub>1</sub>, C<sub>2</sub>-C<sub>4</sub>, C<sub>5</sub>-320°F, 320°F-500°F and 500°F to 700°F (see e.g. page 2, lines 37 to 39 and lines 45 to 46). The Board, therefore, concludes that the lowest carbon number used to define a paraffinic fraction indicates that this fraction contains hydrocarbons of that chain length, or in other words that a C<sub>5+</sub> fraction contains pentanes as the lowest hydrocarbons.

- 1.2.2 In order to substantiate its view, the Appellant relied upon page 2 of D2 (lines 51 to 53) which reads: "... a waxy FT product ... can contain C<sub>5+</sub> materials, preferably C<sub>10+</sub>, more preferably C<sub>20+</sub> materials ... ". Therefore, the term C<sub>5+</sub> paraffinic feed included e.g. the C<sub>10+</sub> fraction which could be selected as a narrower fraction from the broader one.

The Board agrees with the Appellant insofar as a C<sub>5+</sub> fraction may contain sub-fractions like C<sub>10+</sub> or C<sub>20+</sub>. Those are, however, unquestionably different from the broader C<sub>5+</sub> fraction at least with respect to the minimum chain length (see also D2, page 4, lines 15 to 18). Since there is nothing in D2 to indicate that a C<sub>5+</sub> fraction might be free of pentanes, this reference in D2 confirms, rather than contradicts, the Board's interpretation above.

The Board further acknowledges that a selection of a smaller fraction from a broader one would be admissible under Article 123(3) EPC, provided that the possibility

for such a selection is already implicit in Claim 1 as granted. In the present case, however, Claim 1 as granted defines the paraffinic feed solely via the minimum chain length of the hydrocarbons it comprises and thereby mandatorily requires the presence of a C<sub>5</sub> hydrocarbon in the feed. Therefore, there is no room for selecting another lower limit of the chain length than C<sub>5</sub> as the only feature characterizing the paraffinic feed. No mixtures of hydrocarbons are within the scope of Claim 1 as granted as the paraffinic feed containing a hydrocarbon with more than 5 C-atoms as the lowest one.

Any admissible selection of a "smaller" fraction would, therefore, be restricted to the limitation of an upper limit of the chain length if originally so disclosed.

- 1.2.3 In paragraph 2.2 of the letter dated 9 September 2005, the Appellant indicated that the boiling point of the FT feed of "above 350°F (177°C)", now used to define the feed treated in the process of Claim 1 as amended, stood for the minimum boiling point of that feed.

The Board agrees with this interpretation since it corresponds to that used in the art (D2, Table A on page 3) and is most meaningful and consistent with the description of the patent in suit (see 1.2.1 above). It should be added that, in the relevant technical field, this boiling point is normally referred to as initial boiling point IBP of the feed (see also patent in suit, page 3, line 56; D2, loc. cit.).

However, as a consequence, the feed used in the process of Claim 1 as amended is different and, hence, an aliud



to that used in the process of Claim 1 as granted, in that its IBP is above 177°C instead of below 40°C so that it excludes the presence of pentanes. Therefore, also the processes according to Claim 1 of Set H are an aliud to those of Claim 1 as granted.

The Board observes that a feed used in the process of Claim 1 as amended is disclosed in the patent as granted as a preferred embodiment (page 3, paragraph [0018]), but in contradiction thereto and not covered by Claim 1 as granted. Since Claim 1 as granted is perfectly clear with respect to its technical meaning and does not raise doubts with respect to the extent of protection covered, there is no reason to overturn the technical meaning of Claim 1 on the basis of a contradictory statement in the description of the granted patent.

1.3 For the reasons set out above, the Board, therefore, finds that the amendment made to Claim 1 as granted and resulting in Claim 1 of Set H is contrary to the requirements of Article 123(3) EPC.

1.4 Since Set H is the Appellant's only substantive request, there is no basis for further prosecution of the present case.

## 2. *Procedural issues*

The Appellant, in writing, had requested that the case be remitted to the first instance on the basis of each of the previous claim sets (i.e. according to the claims set out in Annex 2 to the contested decision and according to Sets A to G submitted in the appeal

proceedings) and that the Board should consider whether there has been a substantial procedural violation by the Opposition Division which would justify reimbursement of the appeal fee. All these previous claim sets have been replaced during the oral proceedings by Set H, designated as the main request which is, hence, the Appellant's only substantive request. It was not accompanied by a request for remittal.

Therefore and for the reasons given above for the Board's findings that the Appellant's only request cannot succeed, the Board has no reason to consider either under Article 111(1) EPC remittal of the case to the first instance or whether a substantial procedural violation occurred which would have justified reimbursement of the appeal fee (Rule 67 EPC).

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P. Krasa