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D E C I S I O N
of 6 June 2005

Case Number: T 0311/03 - 3.3.1

Application Number: 90870211.1

Publication Number: 0485683

IPC: C07C 15/073

Language of the proceedings: EN

Title of invention:
Preparation of alkylated aromatics

Patentee:
FINA TECHNOLOGY, INC.

Opponent:
ExxonMobil Chemical Patents Inc.

Headword:
Aromatic alkylation process/FINA

Relevant legal provisions:
EPC Art. 123(2), 113(1)

Keyword:
"Amendments - supported by the application as filed (no) -
inadmissible generalization"

Decisions cited:
G 0009/91

Catchword:
-



Case Number: T 0311/03 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 6 June 2005

Appellant: FINA TECHNOLOGY, INC.
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Representative: Leyder, Francis
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Respondent: ExxonMobil Chemical Patents Inc.
(Opponent) 5200 Bayway Drive
Baytown, TX 77522-2149 (US)

Representative: UEXKÜLL & STOLBERG
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 17 January 2003
revoking European patent No. 0485683 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: A. J. Nuss
Members: P. F. Ranguis
S. C. Perryman

Summary of Facts and Submissions

I. The Appellant (Proprietor of the patent) lodged an appeal against the decision of the Opposition Division to revoke the European patent No. 485 683 (European patent application No. 90 870 211.1) in the form of the then pending request for lack of novelty over document

(1) EP-A- 467 007

II. With the statement of grounds of appeal, the Appellant submitted as sole request a single claim which read:

"1. In an alkylation-transalkylation process, for the preparation of alkylated aromatics, the steps comprising:

a) supplying a feedstock containing an aromatic substrate (Fig. 7-52) into a reaction zone containing a molecular sieve aromatic alkylation catalyst (Fig. 7-56);

b) supplying a C2-C4 alkylating agent (Fig. 7-51) to said reaction zone;

c) operating said reaction zone at temperature and pressure conditions to maintain said aromatic substrate in the liquid phase and causing alkylation of said aromatic substrate by said alkylating agent in the presence of said catalyst to produce an alkylated product comprising a mixture of monoalkylated and polyalkylated aromatic products;

d) recovering said alkylated product from said reaction zone and supplying said product from said reaction zone to a first separation zone for the separation of said aromatic substrate (Fig. 7-61);

- e) operating said separation zone to produce a lower boiling fraction comprising said aromatic substrate and a higher boiling fraction comprising a mixture of monoalkylated aromatic-polyalkylated aromatic mixture;
- f) supplying said higher boiling fraction from said separation zone to a second separation zone (Fig. 7-65);
- g) operating said second separation zone to produce a second lower boiling fraction comprising monoalkylated aromatic product and a higher boiling fraction comprising heavier polyalkylated aromatic product;
- h) supplying at least a portion of said polyalkylated aromatic product including substantially all of the dialkylated and trialkylated aromatics in said polyalkylated product to a transalkylation reaction zone containing a molecular sieve transalkylation catalyst (Fig. 7-72);
- i) supplying said aromatic substrate (Fig. 7-73) to said transalkylation zone;
- j) operating said transalkylation reaction zone under temperature and pressure conditions to maintain said aromatic substrate in the liquid phase and effective to cause disproportionation of said polyalkylated aromatic fraction to arrive at a disproportionation product having a reduced polyalkylated aromatic content and an enhanced monoalkylated aromatic content;
- k) supplying at least a portion of said disproportionation product (Fig. 7-75) to said first recited separation zone (Fig. 7-61);

the improvement being characterized in that the transalkylation catalyst comprises a molecular sieve selected from the group consisting of zeolite beta."

- III. In the statement of grounds of appeal, the Appellant argued that such a claim derived from Claim 1 as granted and Claim 6 as granted which disclosed the use of zeolite beta as transalkylation catalyst.
- IV. The Respondent (Opponent) contended that the use of the zeolite beta transalkylation catalyst had only been disclosed in the application as filed in connection with the feedstock where the aromatic feedstock comprised benzene. The generalization to any feedstock comprising an aromatic substrate represented an inadmissible generalization of the content of the application originally filed.
- V. By a communication attached to the summons to oral proceedings scheduled on 8 June 2005, the Board had informed the parties that the detailed objections *inter alia* under Articles 123(2) EPC raised by the Respondent would have to be discussed.
- VI. With a letter received on 1 April 2005, the Appellant submitted without comment the granted version of document (1).
- VII. With a letter received on 3 May 2005, the Appellant informed the Board and the Respondent that it would not attend the oral proceedings.
- VIII. By a communication dated 23 May 2005, the Board informed the parties that the oral proceedings were cancelled and a written decision would issue.
- IX. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the

basis of the single claim submitted with the statement of grounds of appeal.

The Respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible
2. *Article 123(2) EPC - Amendments*
 - 2.1 In essence, the single claim recites the subject-matter of Claim 1 as originally filed with the added feature "the improvement being characterized in that the transalkylation catalyst comprises a molecular sieve selected from the group consisting of zeolite beta."
 - 2.2 It is, first, observed that the claim at issue is not a combination of Claims 1 and 6 as granted as contended by the Appellant since the subject-matter of Claim 6 requires benzene as an aromatic substrate.
 - 2.3 It is, therefore, necessary in the present case to examine the compatibility of the amendment with the requirements of Article 123 EPC (cf. G 9/91, OJ EPO 1993, 408, point 19 of the reasons).
 - 2.4 As pointed out by the Respondent, the application as originally filed discloses the use of a zeolite beta as transalkylation catalyst only in a specific embodiment where the aromatic substrate is a **benzene** feedstock and the alkylation catalyst is selected from the group consisting of zeolite beta, zeolite omega, and zeolite

Y (see page 17, line 24 to page 18, line 13 and Claim 6).

- 2.5 Since the claimed subject-matter encompasses the use of a zeolite beta as transalkylation catalyst in an alkylation-transalkylation process wherein the supplied feedstock contains any aromatic substrate and the alkylation catalyst is generically defined (see step a), it derives therefrom that the amendment represents a generalization of a specific embodiment disclosed in the application as originally filed.

However, under Article 123(2) EPC, such a generalization is only admissible if the skilled person can recognize without any doubt from the application as originally filed that in the alkylation-transalkylation process defined therein, the use of zeolite beta as transalkylation catalyst is not closely associated to a benzene feedstock and an alkylation catalyst selected from zeolite beta, zeolite gamma and zeolite Y but applies directly and unambiguously to a more general process involving any alkylation catalyst and any aromatic substrate.

In response to the objection raised by the Respondent, the Appellant submitted nothing to support such a generalization. Nor has the Board on its own been able to find any indication supporting such a generalization. Thus the Board is forced to conclude that such an amendment is an inadmissible extension of the content of the application as originally filed and for this reason contravenes the requirement of Article 123(2) EPC.

2.6 In view of the above the present request is not allowable.

3. *Article 113(1) EPC - Right to be heard*

In view of the arguments submitted by the Respondent (see point IV above) and the communication of the Board (see point V above), the decision of the Board is based on grounds on which the Appellant has had an opportunity to present its comments, although it did not in fact do so. This decision is, therefore, in compliance with Article 113(1) EPC.

Since the Appellant had decided not attend the oral proceedings (see point VII above), oral proceedings became unnecessary and the Board was entitled to issue this decision on the basis of the submissions and communications on file.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

N. Maslin

A. Nuss