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Bezeichnung der Erfindung: **Crystalline alumino silicates, a process for
Title of invention: producing them and their use as catalysts
Titre de l'invention :**

Klassifikation / Classification / Classement : C01B 33/28

ENTSCHEIDUNG / DECISION

vom / of / du 8 May 1990

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

The British Petroleum Company p.l.c.

Einsprechender / Opponent / Opposant : Imperial Chemical Industries PLC

Stichwort / Headword / Référence : Theta-1/BP

EPÜ / EPC / CBE EPC Articles 54(3), 69, 83, 84, 87(1), 104(1), 114(2);
Rule 29(1)

Schlagwort / Keyword / Mot clé : "Sufficiency (yes) - commercially available
starting materials" - "supplementation of
specific disclosure by general knowledge"
"Priority (allowed) - no creation of another
invention by addition of error margins to
measured parameters" - "apportionment of
costs (no)"

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt

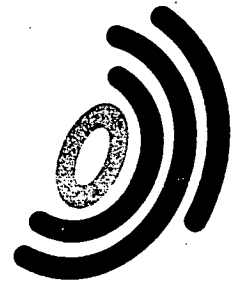
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European Patent
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Boards of Appeal

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Chambres de recours



Case Number : T 212/88 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 8 May 1990

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Decision under appeal : Decision of the Opposition Division of the European
Patent Office dated 12 February 1988 revoking
European patent No. 0 057 049 pursuant to
Article 102(1) EPC.

Composition of the Board :

Chairman : K. Jahn
Members : P. Krasa
G. Paterson

Summary of Facts and Submissions

- I. This appeal is from a Decision of the Opposition Division by which European patent No. 57 049 was revoked. The invention claimed in the patent as granted concerns particular crystalline alumino silicates or zeolites (Claims 1 to 6), as well as a process for making them (Claims 7 to 13), and their use as catalysts in a hydrocarbon conversion process (Claim 14).

The grounds of opposition were that all of the claims lacked novelty (Article 100(a) EPC) and, furthermore, that the patent did not sufficiently disclose how to perform the invention (Article 100(b) EPC).

As to lack of novelty, it was alleged that the European patent was not entitled to claim priority from its priority document, UK application No. 8 100 532, and was, therefore, only entitled to its European filing date of 6 January 1982; and that European patent No. 65 400 (document (1), in the name of the Opponent) was entitled to an earlier priority date of 20 May 1981, although published subsequently, and its disclosure was, therefore, part of the state of the art under Article 54(3) EPC; such disclosure deprived all claims of novelty. Lack of novelty was also alleged having regard to European patent No. 2900 (document (2), in the name of the Patentee).

As to insufficiency, it was alleged that the description did not sufficiently disclose how to carry out a process by which the claimed crystalline alumino silicates could be obtained by a skilled man in the art using his ordinary skill and knowledge.

- II. The claimed crystalline alumino silicate is defined by its composition in terms of the mole ratios of its oxides, and by its X-ray diffraction pattern, and is identified as the zeolite Theta-1.

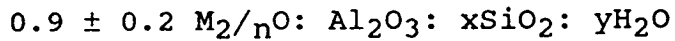
Document (1) discloses a process of making a zeolite identified as Nu-10, also defined by its composition and X-ray diffraction pattern. The Opponent alleged considerable identity between Nu-10 and Theta-1.

In the Decision of the Opposition Division, it was held that certain parameters which were essential for carrying out a process of making Theta-1 were not disclosed in the opposed patent and were not within the common general knowledge of the skilled man, and the patent should be revoked on the ground of insufficiency. It was also held that Nu-10 was not identical with Theta-1, that the claimed invention was, therefore, novel over document (1), as well as over document (2), and that the question of priority need not be decided.

- III. Minutes of the oral proceedings before the Opposition Division not correctly signed were sent to the parties on 12 February 1988 together with a written Decision not properly signed either. In response to a letter from the Respondent pointing out these deficiencies these minutes and the Decision were cancelled by a letter from the Formalities Officer of the Opposition Division on 25 March 1988 and further copies of the minutes and Decision were sent to the parties on 4 May 1988, now correctly signed.
- IV. In the Grounds of Appeal, the Appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form, with process Claims 7 to 13 of the patent as granted being deleted and with Claim 14 being adapted to such deletion and re-numbered as Claim 7.

Claim 1 of the main request reads:

"Crystalline aluminosilicates having the following composition in terms of mole ratios of the oxides:



wherein M is at least one cation having a valence n, x is at least 10 and y/x is between 0 and 25, said aluminosilicates in the calcined hydrogen-form having an X-ray diffraction pattern substantially as set forth in Table A of the specification."

Dependent Claim 2 differs from Claim 1 only by referring to a Table B instead of Table A.

Claim 7 of the main request reads:

"A hydrocarbon conversion process using as catalyst a composition comprising a crystalline aluminosilicate as claimed in any one of the preceding Claims 1 to 6."

Oral proceedings were held on 8 May 1990.

The Appellant's written and oral arguments were essentially as follows:

The patent in suit contains sufficient information to carry out the invention. This was proved not only by three expert opinions submitted by the Appellant, but also by the evidence filed by the Respondent and intended to prove the contrary. In addition, the letters which had been filed by the Appellant but signed by two experts

acting for the Respondent, i.e. the letter dated 10 June 1986 and signed by Prof. Bekkum and Dr. Kouwenhoven, and the letter dated 26 June 1986 signed by Dr. Kouwenhoven (hereinafter referred to as letter I and letter II respectively), clearly showed that a skilled person using ordinary skill was able to produce Theta-1 following Example 2 of the priority document, British application 8 200 532, which corresponds to Example 2 of the patent in suit. This also showed that priority was validly claimed from such priority document, and that document (1) was not part of the state of the art.

The Appellant further submitted that Theta-1 and Nu-10, the product of (1), were exactly the same zeolites, this being proved by a comparison of the respective XRD patterns.

At the oral proceedings, the Appellant also filed an auxiliary request.

- V. The counter-arguments submitted in writing and orally by the Respondent were essentially the following:

Neither the Appellant's nor the Respondent's experts were able to produce Theta-1 when strictly following the disclosure of the patent in suit. Whenever they prepared Theta-1 this success was due to added non-routine features not disclosed in Example 2 or elsewhere. The letters I and II reflected tentative results only and could not be taken as proof that these experts obtained mainly Theta-1, when following the instructions of British priority application 8 100 532.

The Respondent further submitted that the Appellant's priority claim was invalid as there was no definition of Theta-1 in the priority document and Tables A and B of the

patent in suit had also no basis in the priority application. Assuming that Theta-1 and Nu-10 were the same, the patent in suit was anticipated by document (1).

In the oral proceedings the Respondent finally confirmed (in response to the contentions of the Appellant) that Theta-1 and Nu-10 are accepted to be the same zeolite, but stressed the point that Claim 1 should be interpreted as directed to pure Theta-1, and that none of the experts succeeded in producing pure Theta-1 according to the disclosure in EP-A-57 049 or the underlying priority application GB-8 100 532.

On this basis, the Respondent contended that the specification was insufficient, that there was no valid claim to priority and that the claims, therefore, lacked novelty. Furthermore, as the properties of the claimed product could result from the impurities rather than from Theta-1 itself, the Respondent questioned the presence of an inventive step.

The Respondent requested that the appeal be rejected.

- VI. At the end of the oral proceedings the Chairman announced the decision of the Board that the patent would be maintained on the basis of the Appellant's main request. Subsequently, the Appellant requested apportionment of costs which was rejected by the Board.

Reasons for the Decision

1. Procedural matters

The Board notes that following the oral proceedings before the Opposition Division on 1 December 1987, during which

the decision was announced that the patent was revoked, minutes of such proceedings together with a written Decision were sent to both parties on 12 February 1988. As pointed out by the Respondent in a letter dated 18 February 1988, neither the chairman nor the minute-writer signed the minutes: they were signed by another person on behalf of the minute-writer. Such minutes were contrary to Rule 76(3) EPC. Furthermore, the Decision named a person as second examiner who had not been appointed to the Opposition Division and who had not taken part in the oral proceedings.

Subsequently, a letter was issued by the Formalities Officer of the Opposition Division on 25 March 1988, which purported to cancel the above-mentioned minutes and Decision. On 4 May 1988, further identical copies of the minutes and decision were sent to the parties, this time correctly signed by the members of the Opposition Division.

The issuing of the Decision on 12 February 1988 had led the Appellant to file a notice of appeal on 18 March 1988. The cancellation of that Decision and the re-issuing of the decision on 4 May 1988 led the Appellant to file a further notice of appeal on 25 May 1988 against the decision dated 4 May 1988, and to file a Statement of Grounds of Appeal on 5 September 1988 (i.e. within four months after notification of the decision issued on 4 May 1988).

In the Board's view, the mistakes which occurred in relation to the signing of the minutes and written Decision issued on 12 February 1988 were clearly obvious mistakes (in the case of the Decision, within the meaning

of Rule 89 EPC), and the subsequent issue of properly signed documents on 4 May 1988 could have been considered as the correction of such obvious mistakes (under Rule 89 EPC, in the case of the Decision). The correction of a mistake in a decision under Rule 89 EPC has a retrospective effect (cf. Decisions J 4/85 (OJ EPO 1986, 205), T 219/86 (OJ EPO 1988, 254) and T 200/89 dated 7 December 1989 (to be published), in connection with Rule 88 EPC applied by analogy to Rule 89).

Consequently, in the present case, it was unnecessary and inappropriate for the Formalities Officer of the Opposition Division to purport to cancel its first Decision and to issue a new one. In any event any correction of a Decision issued by an Opposition Division can only be instigated by the Opposition Division itself (normally by a further Decision giving the ground of correction). The documents issued on 4 May 1988 could have been considered as corrected versions of the documents issued on 12 February 1988; this course would have avoided leading the Appellant to file a further notice of appeal, and to delay filing a Statement of Grounds of Appeal.

In the particular circumstances of this case, having regard to the cancellation of the Decision dated 12 February 1988, the Board considers that the Decision of the Opposition Division under appeal was issued on 4 May 1988, and that the notice and grounds of appeal were, therefore, duly filed in accordance with Article 108 EPC. The appeal is, therefore, admissible.

2. Amendment

No formal objections arise against the set of claims according to the main request. It differs from the set of claims as granted solely by deletion of the process

Claims 7 to 13 and by adapting Claim 14 (now Claim 7) to this deletion.

The Respondent contended that the amendment by deletion of Claims 7 to 13 should not be allowed, unless the Appellant simultaneously admitted that such claims were invalid. However, in the Board's judgement, the amendment clearly arises out of the grounds of opposition, which allege that Claims 7 to 13 lack novelty. In this circumstance, the amendment can be recognised as appropriate and necessary within Rule 58(2) EPC, and therefore allowable. As was stated in Decision T 295/87 dated 6 December 1988 (to be published, provisional headnote see OJ EPO 1989, No. 10), "amendments to the text of a granted patent during opposition proceedings should only be considered as "appropriate" and "necessary", ... and therefore admissible, if they can fairly be said to arise out of the grounds of opposition."

In the Board's view, if an Opponent attacks certain claims on the basis of grounds of opposition under Article 100 EPC, in normal circumstances the Patentee should be able to amend the patent by deletion of the attacked claims, in his response to the opposition and in order to meet it. Cancellation of the claims, whether by revocation or by voluntary amendment by the Patentee, is after all, the presumed object of the Opponents' attack upon them.

3. Sufficiency

The Respondent asserts that the disclosure of the patent in suit is defective for the following reasons:

- it does not specify the sodium aluminate to be used as a starting material in the examples, especially in Example 2;

- as far as example 2 is concerned, it is not clear which XRD-data define the product concerned;
- whenever the experts acting either for the Appellant or the Respondent succeeded in obtaining Theta-1 following Example 2, they had to do something in addition to its wording, particularly they had to use an autoclave with a Teflon lining and/or to monitor the reaction;
- it is not possible to obtain pure Theta-1 by strictly adhering to the instructions of the Examples.

Several declarations were filed to support these submissions.

- 3.1 Whether or not the missing specification of the sodium aluminate amounts to an insufficiency of the disclosure within the meaning of Article 83 EPC depends on whether the skilled person could take such missing information from common general knowledge, see e.g. T 171/84, OJ EPO 1986, 95, 102. There it is stated that "an error in the description ... is immaterial to the sufficiency of the disclosure if the skilled person would ... rectify it using its common general knowledge." This principle was confirmed in the decision T 206/83 (OJ EPO 1987, 5), in a case where a document was cited as state of the art under Article 54(3) and contained no instruction how to prepare starting materials required for the manufacture of a certain chemical compound.

Example 2 of the patent in suit characterises one of the required starting materials by its chemical name, i.e. sodium aluminate. No more specific information on this compound is given, especially no analysis which would specify the actual aluminium contents. The question is whether or not this information is sufficient within the meaning of Article 83 EPC.

In this connection, letter I and letter II (see paragraph IV above) gain particular importance. Both letters, which were not available to the Opposition Division, report on experiments carried out by Dr. Le Febre. In letter I it is said on page 1:

"In separate experiments two samples of commercial sodium aluminate were used, suppliers BDH Chemicals and Riedel-de Haen, respectively." The table on page 2 of the same letter I shows that products comprising Theta-1 ("mainly Theta-1") were obtainable from sodium aluminate from both of the two commercial sources in accordance with Example 2 of British priority application 8 100 532.

This statement is confirmed by the third paragraph of letter II.

There is not the faintest indication in either of these letters that there was any difficulty in obtaining a proper sodium aluminate or that a particular selection was to be made in this respect for achieving the reported results. Rather to the contrary, these two letters prove that Theta-1 could be prepared (and subsequently identified) from readily available commercial starting materials by a skilled person following the instructions of the British priority application.

Example 2 of the patent in suit is identical with the Example 2 of the priority application apart from the additional sentence "The X-ray diffraction pattern corresponded to an aluminosilicate in accordance with the present invention.", which has no bearing on the process features at all. Thus, in the Board's judgement, no essential information is missing from the specification of the patent in suit in respect to the starting material sodium aluminate.

3.2 It clearly follows from page 2, lines 30 to 42 of the patent that Theta-1 in the calcined hydrogen-form has an XRD pattern "substantially as set forth in Table A" and "preferably ... as set forth in Table B". Both Tables, giving the same figures for the 2-Theta-values and the d-spacings, vary insofar as the ranges for the relative intensities are of different width, those of Table B being narrower.

The relevant passage in Example 2 reads:

"The product was washed and dried and calcined as described in Example 1. It was found by X-ray diffraction, to be substantially Theta-1 with a little cristobalite. The X-ray diffraction pattern corresponded to an aluminosilicate in accordance with the present invention."

Thus, this Example per se is silent on transformation of the product obtained into the hydrogen-form.

However, in view of the information available from both Example 2 and the introductory part of the specification referred to above, there cannot be any doubt that the product of Example 2 was "substantially Theta-1" as defined by the XRD-patterns according to Table A or Table B for the hydrogen-form. There is no evidence before the Board that the product of Example 2 in its hydrogen-form would not comprise an aluminosilicate with the definition of Theta-1 given.

Whether or not the product of Example 2, not being in the hydrogen-form, showed also an XRD-pattern of Table A or Table B is, thus, of no relevance.

The two letters referred to above are again important in this context: There was obviously no difficulty for Prof. van Bekkum and Dr. Kouwenhoven to identify as Theta-1 the product resulting from Dr. Le Febre's work according to Example 2 and to differentiate it from other aluminosilicates. Even if one follows the Respondent's argumentation that the identification of Theta-1 by IR-spectra mentioned in letter I is not conclusive as no IR data are given in the patent in suit, it is clear from letter II that Theta-1 was identifiable by XRD-patterns; it was the purpose of this letter II to inform the Respondent on the XRD data of Theta-1 produced by Dr. Le Febre.

Therefore, in the Board's judgement, the product of Example 2 can be identified as Theta-1 by comparison of its XRD-pattern - of the calcined hydrogen form - with Table A or Table B.

- 3.3 It is established case law of the Boards of Appeal that the requirements of Article 83 and 100(b) EPC are met if in a European patent at least one way is clearly indicated enabling the skilled person to carry out the invention. As stated in T 281/86, "there is no requirement under Article 83 EPC to the effect that a specifically described example of a process must be exactly repeatable. Variations in the constitution of an agent used in a process are immaterial to the sufficiency of the disclosure provided the claimed process reliably leads to the desired product." According to T 281/86 there is no deficiency in the description of a process, if the claimed process can be put into practice without undue burden by the skilled person taking into consideration also common general knowledge (T 281/86, No. 6 of the Reasons for the decision, OJ EPO 1989, 202, 207). This principle was

confirmed e.g. in T 292/85, No. 3.3.2, OJ EPO 1989, 275, 287 and T 182/89, dated 14 December 1989, No. 2, to be published).

The Respondent emphasised that the rotating autoclave used in Dr. Le Febre's successful experiments had a "Teflon inner mantle" (see letter I, annotations to the Table on page 2), a feature which was not disclosed in the patent in suit. He deduces therefrom that this feature of a Teflon lining of the rotating autoclave is essential for obtaining Theta-1. However, there is no evidence available which could refute the Appellants' counter-arguments: the skilled person would always take precautions against the take-up of wall material by the reaction mixture and using a Teflon lining was just one available alternative. As the same result could also be achieved by using a rotating high quality stainless steel autoclave, the use of an autoclave equipped with a "Teflon inner mantle" was rather a matter of convenience than being of technical importance.

In the Decision T 226/85, it was stated that "...in an unexplored field or...where there are many technical difficulties, there must then be available adequate instructions in the specification or on the basis of common general knowledge which would lead the skilled person necessarily and directly towards success through the evaluation of initial failures..." (cf. T 226/85, Reasons for the Decision, No. 8; OJ EPO 1988, 336, 340). In that case the disclosure was found to be defective as this cited precondition was not met.

In the present case, however, taking into account

- that in letter I the Teflon lining was simply mentioned without any indication that such equipment was something particular,

- that the Appellant submitted evidence showing that Theta-1 could be prepared without the use of such a Teflon lining (see Mr Gordon's Declaration of 18 July 1988 and Mrs Belcher's Declaration of 28 July 1988, the correctness of which was not contested by the Respondent),

- that also the Declaration of Mr Wittam dated 3 December 1985 indicates that following Example 6 of the patent in suit a product was obtained which was "a major proportion of zeolite Nu-10" without mentioning the use of a Teflon lining,

the Board holds that the use of such Teflon lining is not crucial to the production of Theta-1. In any case, the use of Teflon-lined autoclaves was known in the art already from 1971 as is demonstrated e.g. by Advances in Chemistry Series 101 (1971), 79, last paragraph. In this connection, as was eventually agreed by the Respondent, and as is, in any event, clear from a comparison of the XRD spectra, Nu-10 and Theta-1 are different names for the same zeolite-type. Thus, any finding regarding the preparation or the properties of Theta-1 holds also for Nu-10 and vice versa.

- 3.4 In respect to the feature "monitoring the reaction" the following is to be noted:

Experts acting for both parties succeeded in preparing Theta-1 comprising products without monitoring the reaction (see e.g. Mr Wittam's Declaration for the Respondent and Mr Gordon's Declaration, both mentioned under 6.3 hereinabove). Again letters I and II are also important in this respect: they do not refer to monitoring the reaction.

Thus, the Board finds that monitoring the preparation of Theta-1 is no essential requirement for obtaining the desired result, but, if monitoring is desired to establish the optimum crystallisation period for a successful production run which cannot be strictly defined but may depend on various parameters (see page 3, lines 30 to 31 of the patent description), this can clearly be done without causing undue burden to a skilled person, as was demonstrated by Mrs Belcher's Declaration of 28 July 1988.

- 3.5 The Respondent emphasised (especially in the oral proceedings) that even if the evidence established that impure Theta-1 could be obtained by a skilled person, no pure Theta-1 could be so produced according to the teaching of the patent in suit. Claim 1 of the patent in suit was said to be directed to pure Theta-1. There was, therefore, a lack of sufficient disclosure as to how to produce the claimed Theta-1. It was contended that impure Theta-1 would be useless for catalytic purposes in current commercial hydrocarbon conversion processes.

According to Article 84 EPC, the matter for which protection is sought has to be defined in the claims, the purpose of which is to allow the determination of the protection conferred by the European patent taking into due account the description and drawings (Article 69(1) EPC). When drafting a claim, the requirements of Rule 29(1) EPC have to be met that the matter for which protection is sought is to be defined "in terms of the technical features of the invention"; see Decision G 2/88, Reasons of the Decision, No. 2.5, OJ EPO 1990, 93, 99. In accordance with Article 69 EPC and its Protocol, the claims of a European patent should be interpreted having regard to the description and drawings (if any).

According to Claim 1 of the patent in suit, the matter for which protection is sought is constituted by crystalline aluminosilicates defined by two groups of parameters, one relating to the chemical composition, the other relating to an X-ray diffraction pattern. No particular degree of purity is mentioned in Claim 1.

In practice, the purity of a product will depend on the particular details of the manufacturing process for the product concerned, and the acceptable amount and nature of impurities will vary in respect of the field of application contemplated for the product.

In the present case, it follows clearly from page 3, lines 19 to 25 of the description that the invention is not only concerned with the production of "pure" Theta-1 but also with the production of "... Theta-1 admixed with for example ZSM-5 ...", by means of the described process.

Furthermore, page 3, lines 50 to 57 refers to the possible use of the aluminosilicates of the present invention as catalysts in a large number of different reactions. There is no suggestion or promise in the description that the only aluminosilicates which are intended to be within the claimed invention are those that are commercially useful in particular reactions. On the contrary, it is suggested that Theta-1 (without any particular reference to the degree of purity) is useful as a catalyst in many reactions, and this has not been contested by the Respondent.

Thus, in the Board's view, in the context of the description, the claims should be interpreted as embracing not only Theta-1 comprising no impurities at all, but also this product together with impurities which may arise in the course of its production.

- 3.6 As far as sufficiency is concerned, Article 83 EPC requires that a product within the claims can be achieved by the skilled person making use of his common general knowledge when following the instruction of the patent. In the Board's judgement, this is confirmed for the present case for the reasons set out above.

For these reasons, the Board holds that the patent in suit complies with the requirements of Article 83.

4. Priority

- 4.1 Document (1) would form part of the state of the art according to Article 54(3) EPC if the priority right claimed from the prior British application 8 100 532 could not be acknowledged. Thus, it has to be determined whether or not the said priority application and the later European patent are for the same invention as required by Article 87(1) EPC.
- 4.2 As already discussed in paragraph 3.1 above, Example 2 of the priority application corresponds to Example 2 of the patent in suit and, following its instructions, a skilled person was able to make Theta-1 (see Nos. 3.1 to 3.5).
- 4.3 The Respondent has alleged that the disclosure of the priority document does not identify Theta-1, because Table 1, which gives the XRD-pattern of this aluminosilicate, is based on a product resulting from Example 1, which could not be carried out by the skilled person because it contains insufficient information concerning the silica source.

In the Board's judgement, on the assumption that Example 1 could not be carried out, nevertheless, according to the last paragraph on page 2 of the priority application, Theta-1 aluminosilicates have an XRD-pattern as shown in

Table 1, which is a clear disclosure relating to the identification of Theta-1. In the first paragraph of page 3 of the priority document, it is said that these XRD-data were obtained on a sample of Example 1 in the calcined hydrogen form. However, for the product of Example 2 it is stated at page 6, lines 10 to 12 that "The product was washed and dried and calcined as described in Example 1. It was found, by X-ray diffraction, to be substantially Theta-1 with a little crystobolite".

The only possible interpretation of this statement in its context is that the product showed, in the calcined hydrogen form, the XRD-pattern of Table 1. Even when the skilled person became aware that in Example 1 the formation of the hydrogen-form and its calcination prior to the XRD-measurement was not mentioned, he would see from the first paragraph on page 3 which steps were to be taken to allow a proper identification of Theta-1. In this connection, again the letters I and II have to be remembered which show - as already stated - that a skilled person had no difficulty in identifying Theta-1 on the basis of the data given in the priority application.

- 4.4 In Claim 1 of the patent in suit Table A, giving XRD-data, is used for defining the products covered. This Table A is not contained in the priority application, which only contains a Table 1 identical with the Table 1 in the European patent. Similarly, Table B of Claim 2 of the European patent has no counterpart in the priority application. Thus, it has to be examined whether the invention as defined in Claim 1 (or in Claim 2) is the same as the invention disclosed in the earlier application, despite the fact that certain features for defining it are not literally identical.

- 4.5 Table A of Claim 1 differs from Table 1 of the priority application by the addition of error bars to the values measured for 2-Theta and thereby to the calculated d-spacings and by giving ranges for the relative intensities instead of single figures, which also amounts to the addition of error margins. Thus, it cannot be said that Table A has no basis in the priority document as it is derived from Table 1. The only question is whether the incorporation of error margins means that the Claim 1 of the European patent does not - or does not only - cover the same invention, as the British application 8 100 532.

In the Board's judgement, the inclusion of such error margins in this context does not change the character or nature of the invention as so defined as there is no evidence before the Board that an aluminosilicate falling within the definition of Claim 1 could essentially differ from Theta-1 as defined in the priority application.

- 4.6 As already mentioned, Claim 2 of the patent in suit defines the aluminosilicates, by reference to the XRD-pattern of Table B. This Table B differs from Table 1 in the same way as Table A, but the ranges given for the relative intensities are narrower. Therefore, the same considerations as given in relation to Table A apply also to Table B.

For the above reasons, in the Board's judgement, the claims of the European patent are in respect of the same invention as that disclosed in the priority application. Therefore, they are entitled to the right of priority according to Article 89 EPC.

5. Novelty

Since the claims of the patent in suit are entitled to a filing date of 8 January 1981, under Article 89 EPC,

document (1) does not form part of the state of the art under Article 54(3), and its contents are irrelevant to the question of novelty.

Document (2) does not disclose an aluminosilicate as defined in Claims 1 to 6 or the use of such an aluminosilicate in a hydrocarbon conversion process as defined in Claim 7.

All the claims of the main request are thus novel.

6. Inventive step

The question of inventive step was raised for the first time at the oral proceedings, no such ground of objection having been alleged and supported in the Notice of Opposition. However, the objection of lack of inventive step is within Article 100(a) EPC.

According to the patent in suit, Theta-1 can be used as such or in admixture with other zeolites as catalyst for a broad range of reactions (see page 3, lines 50 to 57), most of which are important in hydrocarbon conversion (cf. Claim 7 of the main request).

Relying on methanol to hydrocarbon conversion experiments with the hydrogen form of Nu-10, it was shown by the Respondent that even small amounts of admixed ZSM-5 have an influence on the course of the reaction and the product pattern; see Respondent's letter dated 12 March 1987, pages 3 and 4.

The Respondent deduced therefrom that ZSM-5 present as an impurity in Theta-1 prepared according to the instructions of Example 2, would in fact act as the active catalyst and

camouflage the properties of Theta-1. He concluded that there was no basis in the patent for determining whether inventive step is present.

These conclusions were contested by the Appellant who submitted that the methanol conversion cannot be compared with the hydrocarbon conversion of Claim 7 and that the product distribution obtainable with ZSM-5 in such a hydrocarbon conversion differs from that obtainable with Theta-1 as a catalyst, which was not refuted by the Respondent.

In such a situation, having regard to the late introduction of the Respondent's contentions and the fact that it is certainly not clearly established, the Board disregards this submission as inadmissible.

7. Late filed documents

The Respondent submitted the documents EP-A-55 045 and EP-A-77 624 only on 15 March 1990 without giving reasons for such late filing. After consideration of these documents in accordance with Article 114(1) EPC, the Board concluded that even if it were to take them into account, it would not arrive at a different decision. Thus, these documents are disregarded in accordance with Article 114(2).

8. Costs

- (a) As stated in paragraph VI above, the Appellant requested an apportionment of costs after the substantive decision in the appeal proceedings had been announced.

The practice before the Boards of Appeal is that all requests by parties, including any request as to costs, should be made before any decision is announced in oral proceedings. In this connection, it is relevant that an apportionment of costs under Article 104 EPC is not dependent upon the result of a case as announced in the decision, but depends upon "reasons of equity". This is in contrast to proceedings in the U.K., for example, where costs commonly follow the result of the decision.

However, as far as the Board is aware, the above practice has not been published in any form, and there is, therefore, no reason why parties or their representatives should be aware of it. In these circumstances, exceptionally in this case, the Board considered the Appellant's request even though the substantive decision had been announced.

- (b) The Appellant requested an apportionment of costs primarily on the basis that letters I and II, concerning work done under the instruction of Dr. Kouwenhoven, identified in paragraph IV above, had wrongly not been made available to the Opposition Division.

The following statement by Dr. Kouwenhoven is contained in his Declaration dated 5 March 1987, filed before the Opposition Division on 10 March 1987: "I have made a total of five attempts to carry out the preparations described in Examples 1 and 2 of UK patent application No. 8 100 532, but I have found that I have been unable to prepare zeolite Theta-1".

Letters I and II show that Dr. Kouwenhoven's statement is not the whole truth, insofar as the statement makes no reference to the experimental work which had successfully prepared Theta-1. The Appellant submitted that if the two letters had been made available to the Opposition Division, they would have decided the case in favour of the Appellant, and the appeal proceedings would have been avoided.

In the Board's view, the above quoted statement in the Declaration dated 5 March 1987, by referring to "a total" of five (unsuccessful) attempts, is certainly prima facie misleading in relation to a central issue in the case, namely whether Theta-1 could be prepared following Example 2. The Board has itself relied upon the contents of letters I and II in reaching its decision contrary to that of the Opposition Division in respect of this issue. Nevertheless:

- (i) In the absence of further information and enquiry, it would be inappropriate for the Board to express any further views on the matter, except to emphasise the obvious importance of full and frank disclosure in relation to evidence filed on behalf of parties to proceedings before the EPO.
- (ii) In any event, the Board is not satisfied that, even if all the information which was made available to the Board of Appeal had been available to the Opposition Division, any costs

in relation to the opposition procedure and the appeal procedure in combination would necessarily have been avoided or saved.

For these reasons, the Board refuses an apportionment of costs.

Order

For these reasons, it is decided that:

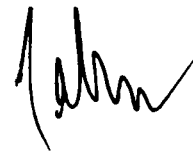
1. The decision under appeal is set aside.
2. The case is remitted to the first instance with an order to maintain the patent in accordance with the main request.
3. The request for apportionment of costs by the Appellant is refused.

The Registrar:



M. Beer

The Chairman:



K. Jahn

U. 24.7.80

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