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**D E C I S I O N**  
of 23 March 1995

**Case Number:** T 0534/94 - 3.3.1

**Application Number:** 88118336.2

**Publication Number:** 0315180

**IPC:** C10G 25/08

**Language of the proceedings:** EN

**Title of invention:**

Liquid-solid separation process and apparatus

**Patentee:**

Bartholic, David B.

**Opponent:**

STONE & WEBSTER ENG. CORP.

**Headword:**

Upgrading of hydrocarbon crude/BARTHOLIC

**Relevant legal provisions:**

EPC Art. 99, 111(1)

EPC. R. 55(c), 56(1)

**Keyword:**

"Admissibility of Notice of Opposition - reasons sufficient in support of the grounds for opposition"

"Remittal to Opposition Division"

**Decisions cited:**

T 0222/85, T 0002/89, T 0199/92, T 0204/91

**Catchword:**

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Case Number: T 0534/94 - 3.3.1

D E C I S I O N  
of the Technical Board of Appeal 3.3.1  
of 23 March 1995

**Appellant:**  
(Opponent)

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**Representative:**

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**Respondent:**  
(Proprietor of the patent)

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**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office of 21 April 1994 pursuant  
to Rule 56 EPC finding the Notice of Opposition to  
be inadmissible.

**Composition of the Board:**

**Chairman:** A. J. Nuss  
**Members:** J. M. Jenk  
R. E. Teschemacher

## Summary of Facts and Submissions

- I. The Appellant (Opponent) lodged an appeal against the decision of the Opposition Division on the rejection of the opposition against the patent No. 0 315 180 as inadmissible pursuant to Rule 56(1) EPC since the requirements of Article 99(1) and Rule 55(c) were not met.

The opposition was based on Article 100(a) EPC and had been filed against the patent as a whole.

- II. The Opposition Division held that the Opponent had indicated in the Notice of Opposition the extent to which the patent in suit was opposed, the grounds on which the opposition was based as well as evidence, notably the documents

- (1) US-A-4 419 221
- (2) US-A-4 585 544
- (3) US-A-4 338 187
- (4) US-A-4 585 543
- (5) US-A-4 057 490
- (6) US-A-4 814 067

presented in support of these grounds. However, the Opponent had failed to present arguments in support of the grounds of opposition as required by Rule 55(c) EPC. Moreover, they held that, having regard to the fact that six documents were cited, it was totally unclear which prior art document was considered by the opponent as either removing the novelty or to form the basis for an objection of lack of inventive step of the claimed subject-matter. Owing to the lack of arguments, they

were unable to understand the opposition and, therefore, could not reach a reasoned decision based on the submissions of both parties.

- III. Oral proceedings were held on 23 March 1995.
- IV. The Appellant (Opponent) requested that the decision under appeal be set aside and that the European patent No. 0 315 180 be revoked. Alternatively, he requested that the decision under appeal be set aside and the case be remitted to the Opposition Division for further prosecution.

The Respondent (Patentee) requested that the appeal be dismissed.

- V. Independent Claims 1 and 18 according to the patent in suit read as follows:

- "1. A continuous fluidized process for upgrading a heavy liquid hydrocarbon charge containing solid or solid-forming contaminants, which process comprises:
- a) atomizing said charge to provide a stream of liquid particles, said liquid particles being of a pre-selected size;
  - b) introducing said atomized charge horizontally into a contacting zone;
  - c) introducing a stream of hot fluidized vaporizing medium containing heated solid particles solely derived from said contaminants in said feed downwardly into said contacting zone to intimately contact said atomized charge therein to vaporize hydrocarbons in said charge while not inducing cracking thereof;
  - d) vaporizing a substantial portion of said hydrocarbons to form a mixture of said solid

particles entrained in the resulting vaporized hydrocarbons, said contaminants being deposited on said solid particles or forming new solid particles;

- e) passing said mixture rapidly into a separation zone having an inlet positioned opposite the point of introduction of said atomized charge into said contacting zone and separating solid particles from said vaporized hydrocarbons therein;
- f) heating at least a portion of said separated solid particles to raise the temperature of said solid particles to a temperature higher than the temperature at which said vaporization occurs;
- g) recycling the heated solid particles to said contacting zone to transfer heat to the atomized feed; and
- h) condensing said vaporized hydrocarbons and recovering a hydrocarbon product having a reduced content of said contaminants."

"18. An apparatus for the treatment of a liquid hydrocarbon charge containing solid-forming contaminants comprising:

- a) a contactor vessel having at least one liquid charge inlet, at least one vaporizing media inlet above said charge inlet and at least one vapor-solids outlet;
- b) atomizing means positioned in said charge inlet for forming small particles of said liquid charge having a preselected size and directing said particles of liquid horizontally into said contactor vessel;
- c) vaporizing medium introduction means positioned in said vaporizing medium inlet for introducing a fluidized mixture of a gas dispersion medium

- and hot circulating solid particles into said contactor vessel vertically so as to traverse the path of said liquid particles and intimately contact said liquid particles; and
- d) separator means connected to said vapor-solids outlet for separating solid particles entrained in vapors formed in said contactor vessel;
  - e) wherein said vapor-solids outlet is positioned in said contactor vessel opposite said liquid charge inlet to receive said vapors and entrained solid particles and rapidly pass the same into said separator means."

VI. The Appellant argued that a Notice of Opposition was addressed to skilled persons being familiar with the examination of novelty and inventive step and that the form of presentation of the substantiation of an opposition was free.

Moreover, he argued that in the Notice of Opposition as submitted in the present case lack of novelty and lack of inventive step were concluded on the basis of the cited documents.

In this connection he contended that the Notice of Opposition comprised a comparison of the individual features of the process Claims 1 to 17 of the present patent with those of the processes described in the cited documents (1) and (2), and a second one of the individual features of the apparatus Claims 18 to 30 with those of the devices described in the cited documents (1) and (6), both comparisons in the form of a Table. These comparisons could only be interpreted with respect to the novelty objection concerning the process claims as meaning that document (1) alone or document (2) (comprising the teaching of document (3) by reference) alone showed all the essential features of

Claim 1, and concerning the apparatus claims as meaning that document (1) alone or document (6) alone disclosed all the essential features of the subject-matter of Claim 18, and that the minor deviations indicated in the Notice of Opposition were obviously so trivial that they could not form the basis for an assertion of novelty.

He also argued that it followed logically from the Notice of Opposition that the objection of lack of inventive step concerning the process claims was based on the disclosure of documents (1) and/or (2), and concerning the apparatus claims on that of documents (1) and/or (6), and that the indicated differences between the claimed subject-matter and that of these two documents were clearly obvious.

In this connection, the Appellant contended that the Notice of Opposition, in a bona fide reading, particularly substantiated lack of novelty of the claimed process by comparing the features specified in Claim 1 with the process features described in document (2), and lack of novelty of the claimed apparatus by comparing the features defined in Claim 18 with the apparatus features indicated in document (1), particularly Figure 1. Furthermore, he pointed out that lack of inventive step was substantiated by combining the teaching of document (1) with that of document (2), which included the teaching of document (3).

He concluded that the Notice of Appeal satisfied all requirements for admissibility.

VII. The Respondent fully agreed with the reasoning of the Opposition Division in that the content of the Notice of Opposition was not sufficient for the Opponent's case to be properly understood. In this connection he contended that it was not at all clear from the Notice of

Opposition, given the number of documents cited, what particular statements therein were alleged to destroy the novelty of the claimed process or to form a basis for an argument on obviousness. In such circumstances the Notice of Appeal was not admissible as followed from the decision T 222/85 (OJ EPC 1988, 128).

VIII. At the conclusion of the oral proceedings the Board's decision to allow the Appellant's alternative request was pronounced.

#### Reasons for the Decision

1. The appeal is admissible.
2. Before examining whether the submitted grounds of opposition under Article 100(a) EPC, namely lack of novelty and lack of inventive step, prevent the maintenance of the disputed patent, it must be decided whether the opposition is admissible.
3. It is accepted jurisprudence with respect to the issue of admissibility of opposition (cf. for instance T 222/85, OJ 1988, 128, under points 4 and 5 of the Reasons; T 2/89, OJ 1991, 51, under points 3 to 5 of the Reasons; and T 199/92, not published in the OJ EPO, under point 1),
  - that the requirement under Rule 55(c) concerning the indication of the facts, evidence and arguments presented in support of the grounds means that the Patentee and the Opposition Division must be able to understand, without undue burden, the case that is being made against the patent in the Notice of Opposition on at least one ground of opposition



raised (cf. also T 204/91, not published in the OJ EPO, under points 5 to 7 of the Reasons),  
- that the requirements under Rule 55(c) must be distinguished from the question of the strength of the opponent's case, i.e. whether that case as presented in the Notice of Opposition is also sufficient to bring about the revocation of the patent, and

- that the question whether a particular Notice of Opposition meets the minimum requirements for admissibility can only be decided in the context of that particular case.

4. In the present case, the Notice of Opposition comprises  
- an introduction concerning the process Claims 1 to 17 of the disputed patent setting out that, having regard to the considerations during the examining proceedings, the essential feature of the process according to Claim 1 of the disputed patent involves the provision of a short contact time to eliminate coking problems by passing the formed mixture of vaporized hydrocarbons and solid particles rapidly into a separation zone having an inlet positioned opposite the point of introduction of the atomized charge into the contacting zone (cf. page 1 of the enclosure to the Notice of Opposition "CLAIMWISE DISCUSSION OF EP 315 180 B1", and also column 10, lines 27 to 30 and 39 to 42, of the disputed patent);  
- a concise discussion of all the six documents cited (cf. page 2 to page 3, first paragraph, of said enclosure), indicating:  
that the process described in document (1) is a cracking process, which comprises the use of a horizontal reactor 12 and a short residence time of the reactants therein as an essential feature;

that document (2) discloses a process for upgrading liquid hydrocarbons using short contact times of vaporized hydrocarbons and hot fluidized particles, whereby according to the teaching of document (3), which is incorporated by reference, atomized liquid hydrocarbons are introduced into the contacting zone at an angle to impinge on a vertical flow of the hot particles;

that it is stated in document (6) that aeration nozzles should be normal to the solids curtain when a gas-liquid mix is the feed; and

that documents (4) and (5) both disclose the use of solids derived from a feedstock to provide inert heat solid particles as a heat carrier in a short residence time thermal cracking process;

- a detailed comparison of the individual features (a) to (h) of the process Claim 1 and the features of the dependent Claims 2 to 15 with the relevant technical features of the subject-matter of both documents (1) and (2) in the form of a Table over nine pages, citing columns and lines (cf. pages 3 to 11 of said enclosure);

- a concise discussion of the essential features of the apparatus as claimed in Claims 18 to 30 of the disputed patent (cf. page 12, first paragraph of said enclosure);

- a brief discussion of the subject-matters of documents (1), (3) and (6) (cf. page 12 of said enclosure), indicating the most relevant features of the devices described in document (1) and (6), particularly that the inlet of the liquid hydrocarbons of the apparatus described in document (1) does not comprise atomizing means but aeration means in the form of steam and that aeration of feed to achieve intimate mixing with solid particles is known from document (6) and

document (3), which is incorporated by reference in document (6);

- a detailed comparison of the individual features (a) to (e) of the apparatus Claim 1 and the features of the dependent Claims 19 to 30 with the relevant technical features of the subject-matter of both documents (1) and (6) in the form of a Table over seven pages, quoting columns and lines, and also with the Drawing illustrating the apparatus disclosed in document (1) (cf. pages 13 to 19 of said enclosure), and
- a statement concluding that, having regard to the documents cited, the subject-matter of the disputed patent lacks novelty and inventive step (cf. the third page of the Notice of Appeal).

5. The Respondent essentially argued that, having regard to the facts that six documents were cited and the correlation of the individual features of the process claims of the disputed patent with certain statements of documents (1) and (2) and of the individual elements of the apparatus claims of the patent in suit with particular statements of documents (1) and (6) in the form of two Tables over several pages was made without any indication what particular statements therein were alleged to destroy the novelty of the claimed subject-matters or to form the basis for an objection on obviousness, the Notice of Opposition as submitted did not meet in full the requirements of Rule 55(c) EPO since the Opposition Division and the Patentee were at a loss as where to start examining the Opponent's allegations.

6. However, in the Board's judgment, having regard to the jurisprudence of the Boards of Appeal indicated above, the reasons in support of the opposition described in the present Notice of Opposition clearly fulfil the

requirements for admissibility of the Notice of Opposition set out in Rule 55(c) EPC concerning "indication of the facts, evidence and arguments".

7. In this connection it is observed by the Board that the facts on which the decision T 222/85 (referred to by the Respondent) is based, are not comparable with those of the present case, since in that case 16 documents are cited, without indicating what statements can form the basis for an objection on novelty or inventive step, imposing an undue burden upon the Opposition Division and the Patentee to understand the attack against the patent in question (cf. point 6 of the Reasons). Moreover, the present case is, in the Board's judgment, much more related to that of the decision T 2/89, in which the Opponent cites two documents and quotes - as in the present Notice of Opposition - relevant passages for the points he considers important (cf. points 3 to 6 of the Reasons). According to this decision, a Notice of Opposition is undoubtedly admissible if the opposition is supported by certain documents and reference is made to the relevant passages therein (cf. point 5 of the Reasons).
  
8. The fact that in the present Notice of Opposition the correlation of the individual features of the claimed process and those of the claimed apparatus with the relevant passages of the documents (1) and (2) and of the documents (1) and (6) respectively are made in the form of Tables and without indicating explicitly what particular statements therein are alleged to destroy the novelty of the claimed process or to form a basis for an argument on obviousness, in the Board's judgment, does not affect its admissibility. In a case like this, wherein the subject-matter of the independent Claims 1 and 18 comprise many individual features, the presentation of the Opponent's case in the form of a

Table for each of these two independent claims, in the Board's view, rather simplifies the understanding of its substance.

Furthermore, it is observed by the Board that a Notice of Opposition is addressed to the Opposition Division and the Patentee who are not only skilled in the art but also competent in examining novelty and inventive step. Thus, in the Board's view, a detailed and exhaustive discussion of matters which are implicit to such skilled persons is not needed to understand the Opponent's case and, therefore, not an admissibility requirement. In this context, it is observed by the Board, that in the present case such skilled persons, having regard to the fact that the features of Claims 1 and 18 are compared with the relevant features of only two documents for each of both claims, quoting columns and lines, as well as the Drawing of document (1), must be able to compare the claimed subject-matters with the indicated relevant statements of the cited prior art and to conclude whether these statements are likely objective to the novelty or to the inventive step.

In addition, it is noticed by the Board, that according to the jurisprudence of the Boards of Appeal the requirements for admissibility within the meaning of Rule 55(c) - as indicated above - must be distinguished from the question whether the statements in the prior art are conclusive and can constitute sufficient reasons for revoking the patent. Thus, the indication in the present Notice of Opposition that the claimed subject-matters comprise modifications or alternative features with respect to the prior art, for instance, in that the process described in document (1) concerns a cracking process instead of a process for upgrading a heavy liquid hydrocarbon charge as claimed in present Claim 1 of the disputed patent or that the inlet of the liquid

hydrocarbons of the apparatus described in document (1) comprises aeration means (steam) instead of atomizing means as claimed in present Claim 18, might be relevant to a substantiative assessment of its merits, but - in the Board's judgment - does not affect the question of admissibility.

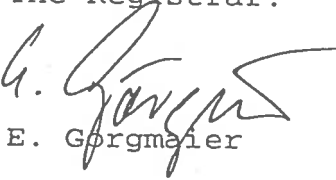
9. It follows from the above considerations that the Notice of Opposition is admissible and that, therefore, the contested decision must be set aside.
10. The Appellant also requested that the patent be revoked. However, having regard to the facts that the first instance did not examine whether the grounds for opposition prejudice the maintenance of the disputed patent, and that the parties have the right to a decision in two instances, the Board considers it appropriate that this matter be decided by the Opposition Division.
11. In the circumstances of this case, the Board decides accordingly to exercise its power under Article 111(1) EPC to remit the case to the Opposition Division for further prosecution in accordance with Appellant's alternative request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division for further prosecution.

The Registrar:

  
E. Gorgmeier

The Chairman:

  
A. J. Nuss

