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Datasheet for the decision of 22 December 2011

Case Number: W 0002/10 - 3.3.05

Application Number: PCT/GB2007/003755

Publication Number: WO 2008/043982

IPC: C01B 31/08

Language of the proceedings: EN

Title of invention:
Carbonising and/or activating carbonaceous material

Applicant:
British American Tobacco (Investments) Limited

Headword:
Rotary furnace/BAT

Relevant legal provisions:
PCT Art. 17(3)(a)
PCT R. 13(1)(2), 40.1(i), 40.2(c)(e)

Relevant legal provisions (EPC 1973):
EPC Art. 154(3)

Keyword:
"Sufficient reasoning (no)"
"Refund of search and protest fees (yes)"

Decisions cited:
W 0035/08, W 0004/85, W 0004/93

Catchword:
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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: W 0002/10 - 3.3.05

International Application No. PCT/GB2007/003755

D E C I S I O N
of the Technical Board of Appeal 3.3.05
of 22 December 2011

Applicant: British American Tobacco (Investments) Limited
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Decision under appeal: **Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the applicants against the invitation (payment of additional fees) of the European Patent Office (International Searching Authority) dated 11 February 2008.**

Composition of the Board:

Chairman: G. Raths
Members: B. Czech
T. Bokor

Summary of Facts and Submissions

I. International patent application no. PCT/GB2007/003755 was filed on 4 October 2007 with 75 claims, claims 1, 15, 20, 23, 24, 26 to 29, and 67 being independent.

Independent claims 1, 15, 23, 24, 26, 27 and 28 read as follows:

"*1. A method for carbonizing and activating carbonaceous material, which comprises supplying the material to an externally fired rotary kiln maintained at carbonizing and activating temperatures, the kiln having a downward slope to progress the material as it rotates, the kiln having an atmosphere substantially free of oxygen provided by a counter-current of steam or carbon dioxide, and annular weirs being provided at intervals along the kiln to control progress of the material.*"

"*15. An externally fired rotary kiln for carbonizing and activating carbonaceous material having a hollow rotary body that has a downward slope towards a discharge end thereof, and which is provided at intervals along its length with annular weirs for controlling progress of the carbonaceous material.*"

"*23. A process for preparing a carbonized particulate product, said process comprising the step of heating an organic resin in a rotary furnace configured to provide a temperature sufficient to cause carbonization of the organic resin, wherein said rotary furnace comprises: an inlet; an outlet; a substantially cylindrical heating chamber extending between the inlet and the*

outlet and which is rotatable about a longitudinal axis; a plurality of lifter bars attached to the internal surface of said heating chamber running substantially parallel to the axis of rotation; and one or more transverse weirs attached to the internal surface of said heating chamber."

"*24. A process for preparing an activated carbon product, said process comprising the step of heating a carbonized precursor resin in a rotary furnace configured to provide a temperature sufficient to cause activation of the carbonized precursor material, wherein said rotary furnace comprises: an inlet; an outlet; a substantially cylindrical heating chamber extending between the inlet and the outlet and which is rotatable about a longitudinal axis; a plurality of lifter bars attached to the internal surface of said heating chamber running substantially parallel to the axis of rotation; and one or more cross-sectional weirs attached to the internal surface of said heating chamber.*"

"*26. A rotary furnace comprising a substantially cylindrical heating chamber rotatable about a longitudinal axis, said heating chamber being apportioned internally into a plurality of cross-sectional zones by one or more cross-sectional weirs, and wherein the internal surface of the heating chamber bears a plurality of lifter bars running substantially parallel to the longitudinal axis.*"

"*27. A method of preparing activated carbon by subjecting char in a rotary furnace at an elevated temperature to an atmosphere of activating gas, wherein*

annular baffles within the furnace define treatment zones in sequence along the furnace, and wherein fresh char entering the furnace causes material being activated to overflow the baffles from one treatment zone to the next."

"*28. A method of preparing activated carbon by subjecting char in a rotary furnace at an elevated temperature to an atmosphere of activating gas, wherein annular baffles within the furnace define treatment zones in sequence along the furnace, and wherein fresh char entering the furnace causes material being activated to overflow the baffles from one treatment zone to the next, and wherein lift bars located in the treatment zones lift portions of beds of the char as the furnace rotates and then permit char to cascade through the activating gas atmosphere and to return to the bed.*"

II. The European Patent Office (EPO), acting as an International Searching Authority (ISA), informed the applicant by means of Form PCT/ISA/206 mailed on 11 February 2008 that it considered that the international application did not comply with the requirement of unity of invention set out in Rule 13(1)(2)(3) PCT. It considered that there were five (groups of) inventions claimed in the international application and therefore invited the applicant to pay four additional search fees in accordance with Article 17(3)(a) and Rule 40.1 PCT.

The invitation to pay additional fees was mailed together with a partial search report citing several prior art documents "X" and "A" categories with regard

to the invention first mentioned in the claims, i.e. the subject-matter of claims 1 to 19; see Form PCT/ISA/206 (Annex, first sheet).

In said invitation (Form PCT/ISA/206 (extra sheet)), the ISA indicated the following reasons for raising the objection:

"*This International Searching Authority found multiple (groups of) inventions in this international application, as follows:*

1. claims: 1–19

The problem solved by the first invention is to provide:
– a process for producing an activated carbon comprising heating a carbonaceous material in a rotary kiln maintained at carbonizing and activating temperatures, the kiln having a downward slope, provided with annular weirs and working under an atmosphere free of oxygen (claim 1)
– the kiln designed for carrying out the process (claim 15).

2. claims: 20–22

The problem solved by the second invention is to provide ...

3. claims: 23–26

The problem solved by the third invention is to provide:
– a process for producing either a carbonised particulate product (claim 23) or an activated carbon

product (claim 24) comprising respectively the step of heating an organic resin under carbonising conditions or a carbonized resin-precursor under activating conditions, in a rotary furnace comprising a plurality of lifter bars and one or more cross—sectional weirs,
— a rotary furnace for carrying out the process refered to above (claim 26).

4. claims: 27-28

The problem solved by the third invention is to provide:
— a process for producing an activated product (claim 24) by subjecting char in a rotary furnace to activating conditions, wherein annular baffles within the furnace define zones in sequence along the furnace (claim 27).

5. claims: 29—77

The problem solved by the fifth invention is to provide...

Non—unity:

The link between the inventions must be a technical relationship which finds expression in the claims in terms of technical features.

The technical relationship between inventions 1 to 4 is a method for producing an carbonized and/or an activated carbon, comprising heating a carbonaceous material under carbonising conditions and/or a carbonised material under activating conditions.

Each of those inventions are characterized by technical features which are different. Carbonized and/or activated materials are well—known from the prior art. Therefore, those inventions are not anymore linked by a common concept that defines a contribution which is novel and inventive.

Invention 5 refers to ...

Hence, inventions 1 to 5 as defined above are not linked to form a single general inventive concept. Therefore, this application does not satisfy the requirements of unity (Rule 13 PCT)."

III. The applicant paid two additional search fees for the inventions 3 (claims 23 to 26) and 4 (claims 27 and 28) under protest and requested their refund since it considered that there was unity between the (groups of) inventions 1, 3 and 4. In its written statement dated 3 March 2008 it set out in particular the following, referring also to specific description passages:

"*A feature of claim 1 that contributes to novelty is the provision of “annular weirs ... provided at intervals along the kiln to control progress of the material.” This feature is discussed in the written description at pages 35-36...*".

"*It will be apparent that the annular weirs solve the problem of residence time, which is particularly acute for beads which are much more flowable than conventional e.g. coconut-derived material, and permit the rotation rae* [sic] *to be selected independently of residence time thus facilitating the cascading of beads*

or other treatment material through the atmosphere within the furnace, and further permit residence time to be controlled using the rate of supply of fresm [sic] *material to be treated.*

The provision of weirs and the advantages of doing so are not disclosed or suggested in GB 2228954 (Sauer et al) or US 1505517 (Woodruff et al) or indeed in any of the references mentioned in the search report.

The same feature of novelty is specified in the claims of Group 3. In claim 26, the relevant language is "one or more transverse weirs attached to the internal surface of said heating chamber." In claim 24, the relevant language is "one or more cross-sectional weirs attached to the internal surface of said heating chamber." In claim 26 it is "said heating chamber being apportioned internally into a plurality of cross-sectional zones by one or more cross-sectional weirs." Again the same feature is specified in the Group 4 claims. In claims 27 and 28 the relevant language is "wherein annular baffles within the furnace define treatment zones in sequence along the furnace." In each of these claims the language used refers to the same structures within the furnace which confer the benefits referred to above.

It is therefore submitted that there is unity of inventive concept between the subject matter claimed in the claims of groups 1, 3 and 4...".

IV. With Form PCT/ISA/228 mailed on 1 February 2010, the ISA invited the applicant to pay a protest fee pursuant to Rule (Rule 40.2(e) PCT), after a review board of the

EPO confirmed the lack of unity of invention and refused the request for refund of the additional search fees.

V. With letter of 25 February 2010, the applicant authorised the EPO to deduct the amount of the protest fee from its deposit account and submitted further comments with regard to what it considered to represent the common general inventive concept of the (groups of) inventions 1, 3 and 4.

Reasons for the Decision

1. Competence of the board

Considering the filing date of the application, the protest is subject to the provisions of the PCT as in force from 1 April 2007. Under Article 154(3) EPC 1973, the board is competent to decide on this protest pending at the time of entry into force of the EPC 2000, see e.g. decision W 35/08 of 6 August 2009, reasons 1.

2. Admissibility of the protest

The appellant's protest against the invitation to pay an additional search fee was filed in time and reasoned, and the protest fee was paid in time. Hence the protest is admissible.

3. Request for reimbursement

3.1 The applicant's written submissions referred to under the above points III and V imply that the applicant

wishes to have the additional search fees and the protest fee reimbursed. Hence, it has to be decided whether or not such a reimbursement is justified, Rule 40.2(c)(e) PCT.

3.2 The applicant only paid two additional search fees for having the (groups of) inventions identified by the ISA as inventions 3 (claims 23 to 26) and 4 (claims 27 and 28) searched. The Board thus has to decide whether or not the invitation to pay additional search fees was justified having regard to the two (groups of) inventions 3 and 4.

4. Unity of invention - Reasoning of the ISA

4.1 According to Rule 13.1 PCT, the international patent application shall relate to one invention only or to a group of inventions so linked as to form a single inventive concept. If the ISA considers that the claims lack this unity, it is empowered, under Article 17(3) PCT, to invite the Applicant to pay additional fees.

4.2 Rule 40.1(i) PCT stipulates that the invitation under Article 17(3)(a) PCT to pay additional fees must specify the reasons why the international application is not considered as complying with the requirement of unity of invention.

4.3 The purpose of setting out reasons is to enable the applicant (and the board in case of a protest) to examine whether the invitation was justified.

4.4 Having regard to the reasons indicated by the ISA in the invitation to pay additional fees (see point II above), the board notes the following:

4.4.1 The analysis of the technical relationship as carried out by the ISA is not complete. More particularly, the ISA did not take into account that all independent method/process claims 1, 23, 24, 27 and 28 and both independent apparatus claims 15 and 26 belonging to the (groups of) inventions 1, 3 and 4 comprise the feature "*rotary kiln*" or "*rotary furnace*" and features relating to built-in components designated as "*annular weirs*" (claims 1 and 15), "*annular baffles*" (claims 27 and 28), "*transverse weirs*" (claim 23), "*cross-sectional weirs*" (claims 24 and 26).

The purpose of all said built-in components in the rotary furnace or kiln is to hold back to some extent und thus control the progress of the material in the axial direction. This can readily be gathered from the wording of the claims themselves as well as from the description, page 35, line 18, to page 36, line 18, and Figure 6.

For the board, the features "*rotary kiln*" or "*rotary furnace*" and, in view of their similar purpose, the features "*annular weirs*", "*annular baffles*", "*transverse weirs*", "*cross-sectional weirs*", have to be considered as same or corresponding features in the sense of Rule 13.2 PCT.

4.4.2 Moreover, the ISA raises its objection based on some "prior art" art which is not specified, but from which

"carbonized and/or activated materials" are supposed to be well known.

The board thus understands that the objection raised by the ISA is an *a posteriori* objection.

4.4.3 However, in the reasoning given by the ISA with respect to "*non-unity*" , it is merely stated, without going into further details, that each of the claimed inventions "*is characterised by features which are different*".

4.5 In decision W 4/85 (OJ EPO 1987, 63) and many subsequent decisions, the Boards of Appeal of the EPO decided that the requirement to give reasons in an invitation pursuant to Article 17(3)(a) PCT was so fundamental that an unsubstantiated invitation could be regarded as legally ineffective.

4.5.1 In the present case, the ISA raised an *a posteriori* lack of unity objection without specifying any document illustrating the prior art it had in mind, making a comparison between said prior art and the claimed subject-matter impossible.

4.5.2 Moreover, the ISA neither determined whether or not the same or corresponding features (see point 4.4.1 above) comprised in the independent claims of the (groups of) inventions 1, 3 and 4, i.e. rotary furnaces/kilns with the built-in weirs/baffles of the types claimed were known from the prior art, nor whether or not said features contributed to establish a technical relationship between the said inventions such as to

from a general inventive concept (Rules 13.1 and 13.2 PCT).

4.6 In its decision to reject the protest as unjustified, the review panel pointed out some differences in wording, with respect to the built-in components, and moreover alleged that the "inventive concept" underlying claim 23 was not clear and that the "inventive concept" underlying claim 27 "appears to be different from that of the first invention" (claim 1). However, new reasons cannot be raised by the review panel against the applicant, and thus cannot cure the deficiencies of the invitation under Article 17(3)(a) PCT; see e.g. decision W 4/93 OJ 1994, 939).

5. Conclusion

In the board's judgement, the invitation to pay additional search fees is not sufficiently reasoned and thus does not comply with the requirements of Rule 40.1(i) PCT. It is, therefore, without legal effect so that the additionally paid search fees must be refunded.

Order

For these reasons it is decided that:

1. The refund of the two additional search fees paid by the applicant is ordered.

2. The protest fee shall be refunded.

The Registrar: The Chairman:

G. Rauh G. Raths