BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [ ] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 2 February 2010

Case Number: T 1554/08 - 3.2.05

Application Number: 00830651.6

Publication Number: 1201387

IPC: B29B 7/28

Language of the proceedings: EN

Title of invention:
Method for regulating the manufacturing process in a mixer

Patentee:
PIRELLI TYRE S.p.A.

Opponent:
Harburg-Freudenberger Maschinenbau GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Relevant legal provisions (EPC 1973):
-

Keyword:
"Admissibility of late-filed document (no)"
"Novelty (main request, yes)"
"Inventive step (main request, yes)"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1554/08 **-** 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 2 February 2010

Appellant: (Opponent)
Harburg-Freudenberger Maschinenbau GmbH
Seevestrasse 1
D-21079 Hamburg (DE)

Representative:
Grosse, Wolf-Dietrich Rüdiger
Valentin Gihske Grosse
Hammerstrasse 2
D-57072 Siegen (DE)

Respondent: (Patent Proprietor)
PIRELLI TYRE S.p.A.
Viale Sarca, 222
I-20126 Milano (IT)

Representative:
Dragotti, Gianfranco
Dragotti & Associati srl
Via Marina 6
I-20121 Milano (IT)

Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 2 May 2008 rejecting the opposition filed against European patent No. 1201387 pursuant to Article 102(2) EPC 1973.

Composition of the Board:

Chairman: W. Zellhuber
Members: P. Michel
E. Lachacinski

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition filed against European Patent No. 1 201 387.

II. The appellant requests that the decision under appeal be set aside and that the patent in suit be revoked in its entirety. A conditional request for oral proceedings was withdrawn in a fax dated 29 December 2009.

The respondent (patent proprietor) requests that the appeal be dismissed, or, as an auxiliary measure, that the patent in suit be maintained on the basis of the sets of claims filed as first and second auxiliary requests on 3 December 2009.

III. The following documents are referred to in this decision:

D1: "Processing: Progress in rubber processing by applying the process computer system PKS", Werner & Pfleiderer
D2: US-A-4,455,091
D7: Bedienungsanleitung PKS 21/30, Stand März 1989, pages 2, 38 to 40

IV. Claim 1 as granted reads as follows:

"1. Method for processing polymer-based compounds and mixtures, which includes regulation of at least one indirect process parameter performed by operating on at

least one direct process parameter, characterized in that it comprises the following phases:

-dividing up processing into a plurality of successive phases;

-determining a linear reference variation, with respect to time ($\Delta P/\Delta t$), of at least one indirect process parameter in at least one of said phases;

-regulating at least one of said direct process parameters, so as to vary said at least one indirect parameter in accordance with the linear reference variation in said phase."

V. In the written proceedings, the appellant has argued substantially as follows in connection with the main request:

At page 17 of document D1, it is disclosed that, with adaptive process control, it is possible to follow a preset temperature or energy curve during mixing. Thus, the feature of claim 1 of determining a reference variation with respect to time of at least one indirect process parameter is disclosed. Whilst a linear reference variation is not explicitly disclosed, the curve would be digitally recorded, whereby linear reference variations will result, which remain constant for each point in time until the following point in time. This is confirmed in document D7, at page 38, according to which, temperature, energy and other values are stored in a computer at particular points in time.

Claim 1 of the patent in suit as granted thus lacks novelty in view of document D1 alone, or at least in

view of documents D1 and D7. These documents relate to the same mixer and therefore must be regarded as forming a single document.

In the event that the subject-matter of claim 1 is regarded as being new, it nevertheless lacks an inventive step in the light of the disclosure of documents D1 and D7 combined with the state of the art.

VI. In the written proceedings, the respondent has argued substantially as follows in connection with the main request:

Document D7 was late filed and should not be admitted into the proceedings, since it is not prima facie highly relevant. In particular, it has not been established that document D7 was made available to the public before the date of filing of the patent in suit. In any case, document D7 refers to the same prior art as acknowledged in the patent in suit, for example, document D2.

There is no evidence that document D1 was made available to the public before the date of filing of the patent in suit. No evidence has been provided as to the relationship between documents D1 and D7.

Document D7 discloses a stepwise progression rather than a linear variation with respect to time. As stated in document D7 at page 40, a curve of temperature against energy is used to perform the control function. There is no suggestion of a linear reference variation with respect to time.

The subject-matter of claim 1 is thus new and involves an inventive step.

Reasons for the Decision

1. *State of the art*

It is noted that document D1 does not bear a publication date. In particular, the indication "WER 04076/2-1,0-IV.86KODO" at the final page of this document cannot be unambiguously interpreted as indicating a particular publication date.

In addition, whilst document D7 bears the date of March 1989, it has not been established that this document was made available to the public before the priority date of the patent in suit.

Whilst it is suggested by the appellant that documents D1 and D7 both relate to the same mixer, there is no evidence for this assertion. Moreover, document D7 relates to control systems referred to as "PKS 21/30", whilst document D1 refers in figure 25 at page 19 to a control system "PKS 20".

Consequently, documents D1 and D7 do not form part of the prior art for the patent in suit. The subject-matter of claim 1 is thus new and involves an inventive step. Claims 2 to 8 relate to preferred aspects of the method of claim 1, and thus similarly involve an inventive step.

In view of the lack of relevance of document D7, it is not admitted into the proceedings.

2. If documents D1 and D7 were to have been regarded as forming part of the prior art, the board would have come to the conclusions as set out below in view of the arguments of the appellant.

Main request

3. *Novelty*

Document D1 does not disclose a method including the steps of determining a linear reference variation with respect to time, of at least one indirect process parameter in at least one of a plurality of successive phases, and regulating at least one direct process parameter, so as to vary the at least one indirect parameter in accordance with the linear reference variation in said phase.

As stated at page 17 of document D1 under the heading of adaptive process control, it is possible to follow a preset temperature or energy curve, as shown in figure 23, by varying rotor speed or ram pressure. There is, however, no suggestion of a ***linear*** reference variation of an indirect process parameter with respect to time.

As stated under point 1 above, the disclosure of document D7 cannot be regarded as forming part of the disclosure of document D1. Further, this document discloses a method in which values of temperature and energy, as well as other variables, are recorded at

successive points in time to produce a preset curve (see page 38).

It is suggested by the appellant that such a method represents a linear reference variation with respect to time, since the value of a measured variable remains constant until replaced by a successive value. However, such a digital representation of a curve, which may be regarded as a stepwise approximation of a curve, is not the same as a linear reference variation, which is defined in the patent in suit, for example at paragraph [0037], as the gradient of a line approximating the reference curve in a specified segment.

The subject-matter of claim 1 would thus nevertheless be new, even if documents D1 and D7 were to be regarded as forming part of the prior art.

4. *Inventive Step*

The features of claim 1 which distinguish the subject-matter of the claim from the disclosure of document D1, as discussed under point 3 above, enable process control without the necessity of continuously controlling the indirect parameters.

Neither of documents D2 and D7 suggests the solution to this problem as specified in claim 1, that is, utilising a linear reference variation of an indirect process parameter with respect to time. Both documents D2 and D7 relate to a method in which process control is based on a reference curve. As stated under point 3 above, a digital representation of a curve does not

amount to a linear reference variation with respect to time ($\Delta P/\Delta t$).

The subject-matter of claim 1 of the patent in suit would thus nevertheless involve an inventive step, even if documents D1 and D7 were to be regarded as forming part of the prior art.

5. Since the main request of the respondent is allowable, it is not necessary to consider the auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

N. Maslin W. Zellhuber