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**Datasheet for the decision
of 9 May 2019**

Case Number: T 2365/15 - 3.2.04

Application Number: 06744502.3

Publication Number: 1883318

IPC: A24C5/31

Language of the proceedings: EN

Title of invention:

A METHOD OF MANAGING A MACHINE FOR MANUFACTURING TOBACCO
PRODUCTS

Patent Proprietor:

G.D S.p.A.

Opponent:

Hauni Maschinenbau GmbH

Headword:

Relevant legal provisions:

EPC 1973 Art. 83, 54, 56

EPC Art. 123(2)

Keyword:

Sufficiency of disclosure - (yes)

Amendments - extension beyond the content of the application
as filed (no)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

T 0149/02, T 1254/06

Catchword:



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Case Number: T 2365/15 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 9 May 2019

Appellant: Hauni Maschinenbau GmbH
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
9 November 2015 concerning maintenance of the
European Patent No. 1883318 in amended form.

Composition of the Board:

Chairman A. de Vries
Members: J. Wright
G. Decker
S. Hillebrand
T. Bokor

Summary of Facts and Submissions

- I. The appellant-opponent lodged an appeal, received 17 December 2015, against the interlocutory decision of the opposition division posted on 9 November 2015 concerning maintenance of the European Patent No. 1883318 in amended form. The appeal fee was paid on 15 December 2015. Statements setting out the grounds of appeal were filed on 4 and 8 March 2016.
- II. The opposition was filed against the patent as a whole and based on Articles 100(a), together with Articles 52(1), 54 and 56 EPC for lack of novelty and inventive step, and on 100(b), insufficiency of disclosure and 100(c) EPC, added subject matter.

The division held, amongst other things, that the patent as amended according to an auxiliary request met all the requirements of the EPC. In their decision the division considered the following prior art, amongst others:

D1: US 4 998 540 A

D2: EP 1 457 121 A2

D3: EP 1 468 617 A2

D4: US 5 216 612

D5: "Policy and Procedure Instruction", Philip Morris, 1996, Legacy tobacco documents library, University of California, USA: Bates Number 2062388105, added 9 July 2002, pages 1 and 2.

D6: "Good Manufacturing Practices", Philip Morris, 1997, Legacy tobacco documents library, University of California, USA: Bates Number 2073885342, added 6 March 2002, pages 1-1 and to 6-7.

D7: WO 00/16647 A1

D8: "Cigarette Pack Overwrap", Leake-PH, ATCO, 16 May 1984, Legacy tobacco documents library, University of California, USA: Bates Number 965047376/7383, added 1 February 2002, pages 1-4.

D9: "Summary - Defective Tip Reduction Group Meeting", Leake-PH, ATCO, 27 June 1984, Memo, Legacy tobacco documents library, University of California, USA: Bates Number 965044227/4232, added 1 February 2002, pages 1-6.

D10: DE 197 19 198 A1

D11: DE 28 42 834 C2

D13: EP 1 300 088 A2

D14: EP 1 121 869 A1

D18: US 3 889 240

D25: "You're aiming for calculably cheaper cigarette production?", HiLiTE, pp. 8-15, TABEXPO 2003

D26: "OEMs raise the bar at TABEXPO", Tobacco Reporter, March 2004, page 54.

D28: "Are Ever Higher Manufacturing Speeds Justified?", pages 1, 5, 50 to 66, Tobacco Journal International, 3/1995 May/June, 1995.

"TABEXPO" prior use, minutes of taking evidence of witness Mr Peter Kalus at oral proceedings before the opposition division, 14 April 2015.

The appellant-opponent filed the following document with their grounds of appeal:

D29: "Finding a middle course in maintenance", Pat Clarke, Tobacco Journal International 5/1990, September-October 1990, Cover page, pages 5, 62, 64 and 65.

III. Oral proceedings before the Board were duly held on 9 May 2019.

- IV. The appellant-opponent requested that the decision under appeal be set aside and that the patent be revoked.

The respondent-proprietor requested as a main request that the appeal be dismissed (i.e. that the patent be maintained in amended form as allowed by the opposition division) and, in the alternative, that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims according to auxiliary requests 1 to 8, filed with a letter dated 25 July 2016.

- V. Claim 1 of the main request reads as follows:

"A method of managing a machine for manufacturing tobacco products, comprising the steps of monitoring the operation of a plurality of dedicated devices and/or machine units utilized in the manufacture of tobacco products (2), and supplying error signals (48) to a master processing and control unit (46) indicating any fault or malfunction in one of the devices and/or machine units, wherein the control unit (46) responds, on receiving the error signal (48), by causing the machine (3; 4) or a portion of the machine to shut down and also by automatically activating at least a step of cleaning up the device and/or machine unit affected by the fault or malfunction, so as to restore conditions enabling the restart of the machine (3; 4) or the portion of the machine, characterized in that the control unit (46) responds also, on receiving the error signal (48), by automatically activating clean-up steps performed on all or certain of the remaining devices and/or units of the machine (3; 4), and in that the single clean-up step performed on each of the remaining devices and/or units is activated only if the time

(Δt_1) needed for its completion is less than or equal to the time (Δt_2) needed to clean up the device and/or unit affected by the fault or malfunction".

VI. The appellant-opponent argued with respect to the main request that the invention as claimed was insufficiently disclosed, that claims 4 to 6 added subject matter extending beyond the application as filed and that the subject matter of claim 1 lacked novelty and inventive step with regard to certain documents.

VII. The respondent-proprietor argued, for the main request, that the invention was sufficiently disclosed, that claims 4 to 6 did not add subject matter and that the subject matter of claim 1 was both new and involved an inventive step in the light of the cited prior art.

Reasons for the Decision

1. The appeal is admissible.
2. Background

The invention relates to a method of managing a machine for the manufacture of tobacco products, typically cigarettes (see published patent specification, paragraph [0001]). During operation of such machines faults may occur. It is known to remove such a fault by automatically shutting down the machine [initiate a stoppage], clean and then restart the machine (see paragraph [0007]).

The object of the invention is to enable a reduction in the down-time attributable to procedures by which

correct operating conditions are restored following a stoppage (see paragraph [0009]).

3. Main request, claim 1, interpretation of features

The Board finds it useful to first explain how it interprets certain claim features.

3.1 "Remaining device"

Claim 1 defines that a particular device/machine unit, one that is affected by a fault, generates an error signal and is automatically shut down and cleaned. The claim goes on to define that clean up steps are performed on "all or certain of the remaining devices".

When reading the claim, the skilled person gives terms their normal meaning. The word "remaining" as an adjective means (see Oxford English Dictionary online - OED) "[t]hat remains; that is left". Thus, the skilled person reads "remaining device" as one which is left after considering those affected by a fault. Thus, in the claim a *remaining* device is one that is not affected by a fault.

3.2 Claim 1 requires, amongst other things, that "the single clean-up step performed on each of the remaining devices and/or units is activated only if the time (Δt_1) needed for its completion is less than or equal to the time (Δt_2) needed to clean up the device and/or unit affected by the fault or malfunction".

The opposition division considered (see the impugned decision, point 16.4) that claim 1 necessarily requires comparing the different cleaning times for fault affected and remaining devices/parts. In the grounds of

appeal (see page 19, point 73), the appellant-opponent argues that this is not the case.

In the Board's view, the claimed method necessarily includes comparing these times ($\Delta t_1, \Delta t_2$). Whether this is achieved by selecting items from a ranked list of previously established cleaning times, as the appellant-opponent has speculated, or the result of a direct and instantaneous comparison of stored cleaning times, does not change the fact that a comparison must be made somehow.

4. Sufficiency of disclosure, Article 83 EPC 1973

4.1 Article 83 EPC 1973 requires that the European patent application must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

4.2 Where sufficiency of disclosure is concerned, the skilled person does not read features of the claims in isolation but will consider the complete disclosure (claims, description and drawings) to provide them with the necessary detail, see the Case Law of the Boards of Appeal of the EPO, 8th edition 2016 (CLBA), II.C.2, and the decisions cited therein.

4.3 The claim requires that the control unit initiates cleaning of both the faulty and a remaining (non faulty) device *on* ("immediately after; as a result of", OED, item 9, corresponding to "upon") receiving the error signal. The claim however also requires that the controller only initiates cleaning of a remaining device if the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) is fulfilled (see last claim feature). The appellant-opponent has argued that this comparison step may take

time (depending on how it is done). If so, it is impossible to start the claimed cleaning steps on receiving the error signal as this would mean starting cleaning at the same time. Therefore, the features are inherently incompatible and the skilled person cannot carry out the invention across the whole range claimed. The Board does not agree.

- 4.3.1 In this regard, the Board notes that the skilled person is intent on making technical sense of the claim and reads it with synthetical propensity, that is by building up rather than tearing down, taking into account the whole disclosure of the patent (Case Law of the Boards of Appeal, 8th edition 2016, II.A.6.1). In particular, rather than taking a strict literalist approach, they approach claim wording reasonably, with a practical mindset that is based on everyday experience and practical feasibility. Moreover, they read the claim in the light of the description, to better understand a claimed invention's contribution in terms of a solution to a technical problem.
- 4.3.2 Thus, it is clear to the skilled person that "on" is to be understood as "immediately after or as result of" only to the extent that this is practically feasible. This understanding necessarily takes into account any finite response time due to the nature of the control loop and mechanisms involved.
- 4.3.3 Nor do they learn anything different from the description. The steps in question (starting cleaning on receiving the error signal and the time comparison step, $\Delta t_1 \leq \Delta t_2$) are explained in the description (see published patent specification, paragraph [0033]). There the skilled person reads that: "To minimize downtime, each of the further clean-up steps [on

remaining devices] would be performed simultaneously with that of cleaning up the faulty or malfunctioning device [...] and, ideally, activated only if the time Δt_1 needed to complete the step is less than or equal to the time Δt_2 needed to clean up the faulty device".

- 4.3.4 The skilled person immediately realises that by carrying out preventative cleaning (preventing future downtime) on a remaining device *simultaneously* with cleaning the faulty device, best use is made of unavoidable downtime.
- 4.3.5 Turning back to the claim with this in mind, the skilled person thus understands that cleaning of faulty and remaining devices "on receiving the error signal" simply means that these cleaning actions must start immediately after and in reaction to the error signal *and*, in the case of the remaining device, when the result of the time comparison ($\Delta t_1 \leq \Delta t_2$) is known.

It is true that, in practice, cleaning the faulty and remaining devices might not start at precisely the same time (*on* receiving the error signal). That said, in the Board's view, however long a processor might need to make a comparison ($\Delta t_1 \leq \Delta t_2$), it would not be so significant as to prevent the skilled person being able to start cleaning both devices at substantially the same time and thus cleaning the remaining device for all intents and purposes simultaneously with the faulty device. Therefore, in this regard, the Board considers that the invention can be carried out over the whole range claimed.

- 4.4 The appellant-opponent has also argued that, in the case where the time to clean the faulty and the remaining device is the same ($\Delta t_1 = \Delta t_2$), cleaning the

remaining device may start after cleaning of the faulty device starts and so extend beyond the time to clean up the faulty device. Thus, so the argument goes, if cleaning time is very short, the invention as claimed saves no downtime, so has no technical effect. Therefore, the skilled person cannot carry out the invention. The Board disagrees.

As already explained, the underlying idea of the invention is to clean a remaining device (substantially) simultaneously with a faulty device. In the worst case, cleaning of a faulty and remaining device start almost at the same time and thus, when $\Delta t_1 = \Delta t_2$, finish at almost the same time.

In the light of this, the appellant-opponent's speculation that some cleaning actions might take very little time would, in the worst case, simply mean that the invention saved no downtime. However, that in some (limited) instances the claimed invention might not produce the desired advantages does not prevent the skilled person from carrying out the invention, all the more as the claim itself does not state that any time-saving is necessarily achieved.

- 4.5 Nor does the Board see any other reason that might hinder the skilled person in carrying out the invention. The skilled person knows how to clean up particular machines from their general knowledge. They can also measure how long a cleaning task takes.

- 4.6 Therefore the Board is satisfied that the claimed invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art using common general knowledge. It

follows that the claim as amended meets the requirements of Article 83 EPC 1973.

5. Added subject matter, main request, claims 4, 5 and 6, Article 123(2) EPC
- 5.1 In the following, unless stated differently, references are to the application as published.
- 5.2 In deciding the question of allowability of amendments under Article 123(2) EPC, the Board, following well established practice (see CLBA, II.E.1.2.1 and the decisions cited therein), must consider whether the amendments in question are directly and unambiguously derivable by the skilled person from the application as filed, using normal reading skills and, where necessary, taking account of their general knowledge.
- 5.3 The wording of present claims 4, 5 and 6 is exactly the same as originally filed claims 6, 7 and 8 respectively. However, the latter referred back to original claim 1 only, which was more general than claim 1 of the present main request.

Therefore, the subject matter of present claims 4, 5 and 6, by way of their back-reference to claim 1, now have additional features, namely those of original claims 2 and 3 incorporated into present claim 1. It follows that the combinations of features of present claims 4, 5 and 6 are not directly and unambiguously derivable from the originally filed claims alone.

- 5.4 In the Board's opinion, the combination of features of present claims 4, 5 and 6 is however directly and unambiguously disclosed in the description.

5.5 The disclosure of the invention commences (page 3, lines 6 to 10) by stating that the object of the invention is achieved by the claims. The invention is then disclosed in detail, with reference to a single example of a line for making cigarettes having two machines (cf. figure 1 and a detail thereof, figure 2), with the information that the invention can be used on any machine for making tobacco products (page 3, last paragraph).

Thus, in the Board's view, the skilled person reads this detailed description keeping in mind that what follows can be applied more generally than the specific example.

5.6 The skilled person learns (page 6, line 18 to page 7, line 9) that, amongst other features, the production line has a controller, sensors for producing error signals indicating a fault so that the controller can shut down the machine. Furthermore (see page 7, lines 25 to 27), the individual machines of the line are equipped with clean-up units.

When (see page 8, lines 11 to 22) the controller receives an error signal, the controller shuts down the faulty machine and initiates clean-up steps in it to restore conditions for its restart. The skilled person will immediately recognise these steps as corresponding to the first part of present claim 1 (claim 1 of the application as filed).

In this same passage and a following passage (see page 9, lines 1 to 5) it is explained that after one or more attempts to remove the cause of the faults, if this is successfully achieved within a predetermined number of attempts, the controller activates the restart

automatically, as claimed in claim 4 of the present main request (claim 6 as filed).

The description continues (see page 9, lines 6 to 15) by explaining the remaining features of present claim 1 (original claims 2 and 3): cleaning remaining devices according to the time criteria $\Delta t_1 \leq \Delta t_2$.

Then follows (page 9, lines 16 to 22) an explanation that the error message contains information regarding the fault and according to the type of fault and accordingly the controller activates different clean-up steps. This corresponds to the features of present claim 5 (claim 7 as filed).

Further on (page 11, lines 21 to last line) the skilled person reads of two cases (break in paper strip of tobacco filler wrap and depletion of production materials) which cause the controller to output an alert signal to a display. The skilled person will immediately recognise this description as having the same features as present claim 6 (claim 8 as filed), albeit with some features of the embodiment (paper type, display) being absent in the claim.

It follows from the above, that the description discloses a single example embodiment comprising all the features of claims 1, 4, 5 and 6 of the present main request.

- 5.7 The appellant-opponent has argued that, because other features of the particular embodiment have not been claimed (for example the paper type and display are not in claim 6), the subject matter of claims 4, 5 and 6 of the main request represents an unallowable intermediate generalisation. In the Board's view it does not.

5.8 According to established jurisprudence (see CLBA, II.E. 1.7 and the decisions cited therein), it will normally not be admissible under Article 123(2) EPC to extract isolated features from a set of features originally disclosed only in combination in a particular embodiment unless the skilled person recognises without any doubt that the isolated feature is structurally and functionally unrelated to those other features and may therefore be applied in a more general context.

In the present case, the features of claims 4, 5 and 6, as such, of the present main request were already claimed word-for-word in the application as filed (claims 6, 7 and 8 respectively). Thus, these features were originally disclosed, structurally and functionally isolated from the remaining features of the embodiment.

5.9 Thus, the skilled person will recognise without doubt that the features of present claims 4, 5 and 6 are applicable in a more general context than the detailed embodiment, so they do not represent an inadmissible intermediate generalisation.

5.10 Therefore, the Board considers that claims 4, 5 and 6 of the present main request do not add subject matter.

6. Main request, novelty and inventive step

If any of the prior art is to take away novelty of claim 1, it must directly and unambiguously disclose, amongst other features, cleaning of a remaining device (one not affected by a fault), decided on the basis of the time comparison $\Delta t_1 \leq \Delta t_2$, where Δt_2 is the time needed to clean the device affected by the fault and

Δt_1 the time needed to complete cleaning the remaining device, as claimed. By the same token, if any combination of prior art is to take away inventive step of claim 1, then the above features must likewise either be disclosed in the prior art or rendered obvious by the prior art with the skilled person's general knowledge. In the Board's view, this is not the case for the reasons that will now be explained.

6.1 D2

6.1.1 The Board first notes that the opposition division (see impugned decision, page 10, last paragraph and page 11, last paragraph) concentrated on the time comparison feature ($\Delta t_1 \leq \Delta t_2$) as a differing feature between claim 1 of the main request (then first auxiliary request) and D2. The appellant-opponent interprets the impugned decision as expressing that D2 discloses that a *remaining* device is cleaned, and argues that the Board is bound by this finding for reasons of *res judicata*. Whether or not this interpretation of the impugned decision is correct, an effect of *res judicata* can, in any case, not arise from the decision of the opposition division as administrative authority, but only from a final decision of the last instance judicial authority, here a Board of appeal (see T 1254/06, page 11, first paragraph, last sentence). Nor does the binding effect sought follow from the doctrine of prohibition of *reformatio in peius*. This doctrine cannot be construed to apply separately to each point or issue decided, or the reasoning leading to the impugned decision (see T 149/02, headnote). Therefore, the appellant-opponent's argument is without merit.

6.1.2 D2 discloses a tobacco making line with machines 2, 3 and 4. Various sensors detect errors in the machines

(see paragraphs [0004] and [0011] "[e]ach machine 2, 3, 4 comprises a respective control unit...in particular for periodically checking the status of machine 2, 3, 4 to determine any error signals ES...").

- 6.1.3 In the Board's view, D2 does not disclose cleaning a "remaining device" (one not affected by a fault) let alone the claimed relative time criteria for deciding to clean a device not affected by a fault ($\Delta t_1 \leq \Delta t_2$).

In the event of an error signal (see paragraph [0014]), the respective control unit 6 stops the machine concerned, and before restarting it, tries to eliminate the cause of error by activating, for example, cleaning devices for "cleaning parts of machine 2, 3, 4 in which tobacco articles are processed."

The appellant-opponent has argued that this implies that some of the parts of the machine that are cleaned did not generate the error signal and are thus *remaining* devices/units in the sense of claim 1. The Board disagrees.

Paragraph [0014] also states that the cleaning devices are activated to eliminate the cause of the error signal ES. In the Board's view, this means those cleaning devices that clean the faulty devices are activated. Cleaning remaining (non-faulty) devices would not eliminate the cause of the error. Therefore, here the Board sees no direct and unambiguous disclosure of cleaning a remaining device as claimed.

By the same token, contrary to how the appellant-opponent has argued, the Board sees no direct and unambiguous disclosure of cleaning remaining devices in D2, claim 6. *The machine* of claim 6 can but be the same

machine that generated the error signal, as defined in claim 1. Claim 6 is, furthermore, silent as to which parts are actually cleaned. They may, for example, be only those parts which caused the alarm (cf. paragraph [0014]). Therefore, the Board sees no direct and unambiguous disclosure in D2, claim 6, of a *remaining* (non-faulty) device being cleaned.

- 6.1.4 The Board also sees no disclosure in D2 of the time comparison criteria ($\Delta t_1 \leq \Delta t_2$) as claimed. Firstly, without the disclosure in D2 of cleaning any *remaining* device, there can be no comparison of the time (Δt_2) to clean the device affected by the fault and the time (Δt_1) to clean a (non-faulty) remaining device. Nor, in any case, does D2 disclose any other time comparison. The appellant-opponent has argued that this is implicit from the description, paragraphs [0007] and [0018]. The Board disagrees.

Paragraph [0007] merely states reduction of downtime as an objective. Paragraph [0018] explains that this can be achieved for example by cleaning and restarting. However, it is not suggested to clean non faulty parts of the machine, let alone based on a relative cleaning time criterion ($\Delta t_1 \leq \Delta t_2$) as claimed.

- 6.2 D1

D1 discloses (see abstract) a device for building a tobacco stream on a foraminous (perforated) belt conveyor. The stream is attracted to the underside of the belt 29 by an under-pressure developed in a suction chamber 31 above the belt (column 8, lines 7 to 16 and all figures).

The Board agrees with the impugned decision (cf. appeal grounds, points 68 to 70, decision section 15.3) that the suction chamber 31 and belt 29 are parts of one and the same device/machine unit that forms the cigarette rod (column 6, lines 25 to 26). The rod forms as a stream of tobacco on the underside of the perforated belt 29 because it is sucked onto it by the under-pressure in the chamber 31 above the belt. Thus, in the Board's opinion, both belt and chamber are constituents of a single device forming the tobacco stream that makes up the tobacco rod, not two separate devices, where one could have a fault and the other be a *remaining* (non-faulty) device in the sense of claim 1.

In the absence of a disclosure of a remaining device, there can be no disclosure of deciding to clean a remaining device according to the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed. Indeed there is no suggestion in D1, not even implicit, of determining cleaning durations, much less comparing them.

6.3 Prior use, TABEXPO

The Kalus witness statement testifies to cigarette making machines called Protos M5 and Protos M8 being presented to the public at a trade fair, TABEXPO. The machines (see page 20, first answer of the witness) automatically clean certain parts, in particular gluing nozzles. Furthermore (see page 20, second answer) a glue nozzle (SE-Leimdüse) is cleaned in a few seconds, but a different nozzle (Max-Düsenbeleimung) takes longer. The appellant-opponent has argued that, for efficiency, in the case of a fault in one glue nozzle, it is implicit that the remaining (non-faulty) nozzle will be cleaned provided the time criterion as claimed ($\Delta t_1 \leq \Delta t_2$) is satisfied. The Board disagrees.

A general need for efficiency alone is neither a direct and unambiguous disclosure of cleaning a remaining (non-faulty) device when another is faulty, nor of any criteria for deciding to do so.

Therefore, the Board sees no disclosure of a remaining device being cleaned, let alone in accordance with the time criterion as claimed ($\Delta t_1 \leq \Delta t_2$).

6.4 D25 and D26

Without prejudice to the admissibility of document D26, the Board is of the opinion that documents D25 and D26, both of which concern the PROTOS machines of the TABEXPO prior use, do not add any more information than can be derived from the Kalus witness statement.

Both documents (see D25, page 12, second bullet and last page, 5th bullet, D26, page 54, right column) confirm the Protos machines had self cleaning functions, for example the gluing unit MAX. However, as with the alleged prior use, under what conditions the decision to clean certain parts is taken is not disclosed, never mind that it should be according to the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed.

6.5 D28

Without prejudice to the question of its admissibility, the Board considers that D28 (see the interview with Stefano Cavalleri, pages 62 to 66, notably paragraph bridging pages 64 and 65) does not disclose the feature of deciding to clean a remaining device based on the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed.

Although the interview talks of complete automation, cleaning is carried out by an operator during brief stops. No criterion is given by which the operator might decide what cleaning to carry out, much less the claimed time comparison ($\Delta t_1 \leq \Delta t_2$). Nor would D28, with the skilled person's general knowledge, render such a comparison obvious. This is because an operator would clean parts sequentially, not in parallel. This being the case, only the total of all cleaning times could possibly be of concern, and the time comparison ($\Delta t_1 \leq \Delta t_2$) would play no role. Therefore, the feature is also not rendered obvious by D28.

6.6 D3

D3 discloses (see paragraphs [0001], [0005] and [0008]) to clean a cigarette making machine automatically during operational pauses. The appellant-opponent has argued with reference to paragraph [0042] that such pauses are inevitably initiated by a fault in the machine and that it is implicit that the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) will be used. The Board does not agree.

Firstly, paragraph [0042] does not say this. Nor is this implicit. Paragraph [0008] explains that cleaning is preferably carried out at regular intervals, in other words cleaning is scheduled, not in response to a fault.

Furthermore (see paragraph [0008]), an entire machine is cleaned by pumping a fluid in, then out. This is a single cleaning operation on all machine parts. Therefore, there can be no question of deciding whether or not to clean a *remaining* (non-faulty) part of the machine based on the time comparison ($\Delta t_1 \leq \Delta t_2$).

6.7 D4

D4 relates generally (see abstract) to an intelligent scheduling of maintenance (whether or not this implies cleaning) for production machines.

Planned maintenance (not fault-response) operations are grouped so that they are carried out together (column 11, lines 11 to 26). Nor is there any suggestion, let alone direct and unambiguous disclosure, of applying any time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed. Rather (see column 4, lines 19 to 38 and column 11, lines 25 to 45), the decision to carry out a task is made on criticality and manpower availability.

The document (column 11, lines 37 to 40) only touches on the aspect of unscheduled maintenance (which might be due to a fault). In this regard it merely teaches that manpower must be available for carrying out such unscheduled maintenance. Therefore, the Board sees no direct and unambiguous disclosure of cleaning a remaining device nor the time comparison feature ($\Delta t_1 \leq \Delta t_2$) as claimed.

6.8 Documents D5, D6, D7, D8, D10, D11, D13, D14, D18 and D29

In the Board's view, none of these documents disclose the time comparison feature ($\Delta t_1 \leq \Delta t_2$) as claimed.

6.8.1 D29 contains, amongst other things, an article (starting on page 62) about maintaining cigarette making machines. Without prejudice to the admissibility of D29, it does not disclose any criteria to decide whether to clean a machine or machine parts after a

fault on another part. It merely discloses (see page 65, middle column) that cleaning should be part of a maintenance programme.

6.8.2 Whether or not the other documents disclose to clean a *remaining* device as claimed, the appellant-opponent has not argued that they disclose the time comparison feature. Nor does the Board consider this to be so.

6.9 Document D9

D9 (see page 2, first paragraph and page 3, point 5) discloses to clean a tobacco making machine at least once per shift during downtime. In the Board's view there is no direct and unambiguous disclosure of deciding to clean based on the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed. Rather, it teaches that cleaning should always be carried out regardless of how long it takes: if downtime (whether or not due to a fault) is insufficient, the machine is shut down for cleaning.

6.10 Therefore, none of the cited prior art directly and unambiguously discloses the feature of deciding to clean a remaining (non-faulty) device based on the time comparison criterion ($\Delta t_1 \leq \Delta t_2$) as claimed.

6.11 In the light of this, the subject matter of claim 1 can but be new, Article 54 EPC 1973.

6.12 Furthermore, the Board does not think that the teaching of any of the cited prior art would render the feature obvious in the light of the skilled person's general knowledge. In the Board's view, arriving at this new time comparison criterion ($\Delta t_1 \leq \Delta t_2$) for deciding to clean a remaining (non-faulty) device, would require

more than simply applying the skilled person's routine skills.

6.13 Since none of the prior art discloses or renders obvious a method of managing a machine having the time criterion ($\Delta t_1 \leq \Delta t_2$) as claimed, whatever combinations of the prior art the skilled person might make (however obvious) they would not arrive at the subject matter of claim 1 of the main request. Therefore, claim 1 involves an inventive step, Article 56 EPC 1973.

7. The Board concludes that the patent as amended according to the main request discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, that the subject-matter of claims 4 to 6 of the main request does not extend beyond the content of the application as filed and that the subject matter of claim 1 of the main request is novel and involves an inventive step. Therefore, the appeal must fail and the Board need not consider the auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated