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Datasheet for the decision of 8 September 2021

Case Number: T 2376/18 - 3.2.04

Application Number: 10173284.0

Publication Number: 2290233

IPC: F03D11/00, F03D7/04, G05B23/02, F03D7/02

Language of the proceedings: EN

Title of invention:
System and method for managing wind turbines and enhanced diagnostics

Patent Proprietor:
General Electric Company

Opponents:
Siemens Aktiengesellschaft
ENERCON GmbH

Headword:

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
Novelty - (yes)
Inventive step - (no)

Decisions cited:

Catchword:

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Beschwerdekammern

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Case Number: T 2376/18 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 8 September 2021

Appellant: (Opponent 1)	Siemens Aktiengesellschaft Werner-von-Siemens-Straße 1 80333 München (DE)
Appellant: (Opponent 2)	ENERCON GmbH Dreekamp 5 26605 Aurich (DE)
Representative:	Eisenführ Speiser Patentanwälte Rechtsanwälte PartGmbB Postfach 10 60 78 28060 Bremen (DE)
Respondent: (Patent Proprietor)	General Electric Company 1 River Road Schenectady, NY 12345 (US)
Representative:	Zimmermann & Partner Patentanwälte mbB Postfach 330 920 80069 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 31 July 2018 rejecting the opposition filed against European patent No. 2290233 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. de Vries
Members:	S. Hillebrand
	W. Van der Eijk

Summary of Facts and Submissions

I. The appeals were filed by both Opponents against the decision of the Opposition Division to reject their oppositions filed against the patent.

In its decision the Opposition Division held i.a. that the method of granted claim 1 was novel and involved an inventive step.

II. In a communication according to Article 15(1) RPBA, the Board gave a preliminary opinion on the relevant issues.

III. Oral proceedings were held before the Board in the presence of all parties.

IV. The Appellants (Opponent 1 and 2) request that the decision under appeal be set aside and that the patent be revoked.

The Respondent (Proprietor) requests that the appeals be dismissed and the patent thus be maintained as granted (main request) or, alternatively, that the decision under appeal be set aside and the patent maintained in amended form on the basis of one of auxiliary requests 1-7, filed with the reply to the appeals.

V. Claim 1 of the main request reads as follows:
"*A method for managing a wind turbine (102) in the event of a trip, the method comprising:*
receiving operational information (130) on operational characteristics of a wind turbine (102);
analyzing the operational information (130) based on a

set of rules (240) to determine a transient fault which has caused the turbine to trip, the set of rules (240) being configurable;
determining whether the fault of the wind turbine (102) is resettable; and
resetting the wind turbine (102) if the fault of the wind turbine (102) is resettable; and
further, on determining that additional operational information (130) of the wind turbine (102) is required based upon analyzing the operational information (130);
receiving additional operational information (130) of the wind turbine (102), wherein the additional operational information (130) comprises a history of the operational information (130) in the recent past, the additional operational information (130) comprising sensor data of the wind turbine (102) up to, and after the trip;
analyzing the additional operational information (130) based on the set of rules (240);
determining, based on the analysis of the additional information, whether the fault of the wind turbine (102) is resettable; and
resetting the wind turbine (102) if the fault of the wind turbine (102) is resettable;
wherein a resettable fault is one which is identified by determining, after a time interval of the wind turbine being tripped, whether the operational parameters are within a permissible range of threshold values."

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in comprising the additional features "*wherein the operational information (130) comprises information on specific values of operational characteristics or parameters including baseline control parameters, input messages, park or wind farm* *configuration, error status including error codes from trip time to shutdown time, error history for wind turbine modules or components therein, parametric data pertaining to various operational parameters of the wind turbine modules, wind turbine configuration, wind turbine status, condition/status flags, sensor data and/or information on at least one of temperature of wind turbine (102) components, hardware faults in components voltage, current, converter, generator, accuracy of sensors, rotor speed sensors, and/or hardware units of the wind turbine (102)*".

Claim 1 of auxiliary request 2 differs from claim 1 of the main request in comprising the additional features "*wherein the set of rules (240) are further configured based on operational characteristics of the wind turbine (102), and fault analysis of the wind turbine (102)*".

Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the operational characteristics of the wind turbine (102) are specified as
"*including historical data, heuristic data, engineering data for the wind turbine, environmental factors, and/or wind turbine configuration*".

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 3 in comprising the additional features
"*wherein a fault analysis logs and an operating configuration are compared to assess whether the rules need to be reconfigured for the existing operating configuration of the wind turbine*".

Claim 1 of auxiliary request 5 differs from claim 1 of the main request in comprising the additional features "*wherein the additional operational information (130) comprises current operating or environmental conditions of the wind turbine (102)*".

Claim 1 of auxiliary request 6 comprises the additional features of claim 1 according to auxiliary requests 2 and 5 as well as the following additional features: "*wherein the fault causing the wind turbine to be reset relate to hardware units of the wind turbine module*".

Claim 1 of auxiliary request 7 differs from claim 1 of auxiliary request 6 in comprising the additional features
"*wherein the wind turbine is reset if the frequency of occurrence of the fault in a given period does not exceed more than a pre-decided threshold value for that period*".

VI. In the present decision, reference is made to the following document:

M1: "Betriebsanleitung ENERCON E-66/20.70 Version 2 Februar 2004".

VII. The arguments of the Appellants (Opponents 1 and 2) can be summarised as follows:
The method of claim 1 as granted is not new or at least obvious for the skilled person in the light of the disclosure of M1, which as a manual was publicly available at the priority date. This applies also for the method of claim 1 according to all auxiliary requests.

The arguments of the Respondent (Proprietor) can be summarised as follows:

Public availability of M1 is not proven. Even if available to the public, M1 does neither disclose, nor suggest the method of claim 1 according to any request, which is therefore novel and involves an inventive step.

Reasons for the Decision

1. The appeals are admissible.

2. **The Patent and its Technical Background**

The patent relates to a method and system for wind turbine management, in particular for deciding whether to reset a wind turbine relatively quickly after a trip in order to reduce down time, see paragraphs [0001], [0005]. Wind turbine control automatically trips the wind turbine if operational parameters exceed a critical threshold value. Operational parameters are not only parameters "within" the wind turbine itself, but may also include environmental conditions, e.g. wind speed, or grid fluctuations.
Usually, wind turbines are reset as soon as the operational parameters have returned within an allowable range, either "manually" by service personnel, or automatically. Further conditions, such as frequent occurrence of such faults, may nevertheless prevent a reset.
Claim 1 of all requests includes two reset options, one based on checking whether operational parameter are within their allowable range, the other taking into account additional operational information comprising sensor data up to and after the trip.

3. **Main Request - Interpretation of Claim 1**

3.1 Claim 1 is best understood in reference to the flow diagram in figure 4, see also paragraph [0048] onwards. This shows the steps involved in an automatic resetting procedure that differentiates between different types of resettable faults. Operational information from the wind turbine is collected and analysed (steps 404 and 406). Depending on the outcome of this first initial analysis the fault is found to allow for a straightforward or easy reset and the turbine is reset (left hand path from step 408 to 412). It may however be found (right hand path from step 408) that the fault is more complicated and requires further information (steps 414, 416) and a further analysis (step 418) before the wind turbine is found to be ready for reset (step 420) and is then reset (step 412).

Examples of faults that allow easy resetting are given in paragraphs [0027] and [0046]. The patent is somewhat sparing as regards detail for more complicated faults, but, see paragraphs [0029] to [0034], this appears to generally involve some form of diagnostic analysis of past operational information.

It is further noted that the patent is generally concerned with automating the resetting procedure, with the relevant control being effected by a system with cpu and memory as shown in figure 2. The scheme of figure 4 represents the general methodology to be realized in system software, so that the necessary steps must be converted to corresponding logic level instructions and decision taking. Claim 1, which is meant to cover such automatic reset methods, is to be understood in this context.

3.2 Turning now to claim 1, its first 5 steps - *receiving operational information*, *analyzing using configurable rules*, *determining a transient fault, determining whether the fault is resettable and then resetting the fault* - can be seen to correspond to the left hand "easy fault" reset path of figure 4, expressed in part at logic level. As they are implemented in software the rules are naturally configurable. The analysis allows the particular fault leading to the trip to be identified in order to decide the relevant reset path (or none if not resettable).

According to paragraphs [0012] and [0019], operational information includes operational parameters of a wind turbine and environmental conditions. Examples are wind gust conditions, temperature in mechanical components such as gear, bearings and others, voltage, current, tower vibrations, grid events.

3.2.1 Neither in these passages, nor in claim 1 itself is the received operational information limited to operational characteristics that are relevant for only one specific type of fault, as alleged by the Respondent. On the contrary, it covers a wide variety of different types of possible faults in order to allow in the following *first* analysis the determination of the *nature* of the fault, which has caused the turbine to trip, see column 3, lines 37 -38 and column 7, lines 25 - 28.

3.2.2 Furthermore, the initial analysis determines whether the fault is "transient in nature", cf. column 3, line 28, in accordance with criteria laid down in the set of configurable rules for allowing a reset of the wind turbine after occurrence of this specific fault. According to column 7, lines 48 - 55 and paragraph

[0040], a permissible range of threshold values can form part of these criteria as well as the frequency of occurrence of the fault. This may thus include - as part of the set of rules - checking for a maximum permissible frequency of occurrences of a fault, whether or not such a safety check is carried out as a matter of routine before any reset (step 410 of Fig. 4, paragraph [0050]).

3.3 The following steps of claim 1 - *determining that additional operational information is required, receiving this information that comprises historical information and sensor data after the trip, analyzing it, determining whether the fault is resettable and resetting* - pertain to the right hand - "complicated fault" - reset path of figure 4.

3.3.1 It is common ground that in this right hand flow path the second analysis, the additional operational information and the rules, on the basis of which the additional operational information is analyzed, are different from those employed in the first, initial analysis - if only with regard to different threshold values due to particular environmental conditions as in the example provided by the Respondent.

3.3.2 The list of additional operational information in claim 1 is not exclusive and may comprise other information or other sensor data. In any case, what information and data is required, requested and received need not always be the same. In column 9, lines 6 - 11 "*current* operational or environmental conditions, for example *current* wind speed, wind gust data, and the like" are mentioned, i.e. sensor data after the trip. By the same token, the additional information includes sensor data up to the trip in various embodiments, in other embodiments *further* sensor data after the wind turbine has tripped, see column 10, lines 37 - 42.

3.3.3 The Board agrees with the Respondent that whether additional operational information needs to be requested depends on the specific nature of the fault (such as in overheating of a component in the examples of paragraphs [0027] and [0055]) and can thus be seen to be the result of the initial analysis prior to and necessary for determining whether a fault is resettable. This is confirmed in paragraphs [0049] and [0055], in which the (conditional) determination to request advanced operational information is presented as already being an outcome of the *first* analysis taking place in step 406 of Fig. 4, that is before deciding that the turbine is resettable, step 408 in figure 4. In the example of paragraph [0055], it is for instance determined to request additional information in case the operational information received so far would not be "sufficient" for making a sound decision on reset. Only then can it be decided that the turbine is resettable and a reset attempt made.

The rather broad term "additional" can thus be considered in the context of claim 1 read in the light of the description as defining further operational information beyond that used for analyzing the *nature* of the fault causing the wind turbine to trip. Whereas the nature of a fault is determined from operational information routinely received after each trip, this additional information that is subsequently acquired and only when necessary will be specific to the type of fault determined in the first analysis.

3.3.4 Although in the sequence of steps as mentioned in claim 1, the step of requesting additional operational information follows a first step of reset, it is clear from the wording of this feature itself, namely "determining that additional ... information is required *upon* analyzing the operational information", that this additional information is requested as a result of and following the initial analysis, as confirmed by the passages cited above. This would appear to be in discord with figure 4 where (step 408 to 414) the request is made if in step 408 the fault is not found to be resettable. However, the aim of the initial analysis is to differentiate between the different types of fault, those that allow easy reset and those that require more information. Thus, logically the request is only made if an easy reset is not possible, or, put otherwise, the system has identified that the fault is not one that allows easy reset. If step 408 is understood as representing the outcome of the analysis of step 406 and being an integral part thereof, figure 4 can be reconciled with the wording of claim 1.

Thus, in the Board's understanding the most technically sensible reading is that the additional information is requested as a result of the initial analysis

3.4 Finally, the Board reads the last feature of claim 1 "wherein *a resettable fault is one .....*" as a definition of what a resettable fault is, namely one where, following a trip, the relevant operational parameter(s) eventually, after some time return to values within a permissible range. Rather than that this feature requires the return to be determined upon the elapse of some time interval, it is understood as nothing more than that (for a resettable fault) the return within range will take place after some time. This is confirmed by the examples that indicate that the decisive criterion is the parameter returning within the permissible range, not the particular time at which it occurs after trip, which in any case according to the patent varies according to the type of fault, cf. column 8, lines 46 to 48.

Thus also, according to column 8, lines 1 - 5 and column 12, lines 51 - 55, the wind turbine can "be safely reset *once* the temperature gets" or "is below the predetermined safety limit"; according to column 8, lines 24 - 30 and column 9, lines 50 - 53, the wind turbine or operational information is *monitored* "to ascertain *if*" or "to identify *when* the voltage and/or the current levels have stabilized within the corresponding" or "acceptable upper and lower thresholds"; according to column 9, lines 18 - 21 and column 12, lines 38 - 40, the wind speed profile is *monitored* "to ascertain *the time at which* the wind speed profile is within the acceptable thresholds", and the trip is reset "*once* wind becomes steady and the average wind speed is below a predetermined safety threshold"; according to column 11, lines 46 to 48, the fault is identified as being resettable "*if* the operational information indicates that the operational parameters lie within the threshold values"; and finally, according to column 13, lines 5 - 10 and 13 - 15, the wind turbine may be reset "*if* the difference among speed sensors falls below a pre-determined threshold value" and "*after* the grid is restored".

It is also apparent from the above that this definition refers to faults that allow simple or straightforward resetting, corresponding to step 408 in figure 4.

Clearly, where additional information such as historical information or sensor data are required resettability is no longer determined only by a return of the operational parameter(s) within acceptable ranges but additional criteria apply. Thus, the determination of resettability in the second part of the claim, which is "based on the analysis" of the additional information and corresponds to step 420 in figure 4, is in fact a different determination.

4. **Document M1 - Public Availability**

4.1 M1 is an operating manual for the wind turbine ENERCON E-66 / 20.70 of February 2004 (see pages 1 - 3). Whilst the Respondent does not contest the sale and installation of wind turbines of this model before the priority date of the patent (28 August 2009), they consider the public availability of M1 not to be proven as no evidence had been provided that exactly this version of the manual has been handed out to customers before priority or that this type of wind turbine had not been subject of agreements on confidentiality. Since the allegations pertained to activity that was exclusively in the sphere of Appellant 2, the relevant standard should be "up to the hilt".

4.2 The Board does not share this view. Because the particular model of wind turbine in question, the Enercon E-66, was marketed and freely available to the public before priority as acknowledged by the Respondent , the standard of proof "balance of probability" applies, CLBA 2019 III.G.4.3.1, 4.3.2 a). In this particular case it is therefore highly probable that the sale of a wind turbine would be accompanied by an operating manual to assist the owner or operator in the operation of what is a very costly and complex machine. Absent any evidence to the contrary the Board has no reason to believe that the date of February 2004 appearing on the cover page cannot be taken as the publication date of M1, see also CLBA 2019 I.C.3.2.1 f) regarding public availability of instruction manuals and user guides. Indeed the date is repeated in the "Impressum" on page 2, a statement that is legally required (in Germany) in published documents to indicate ownership and authorship of content.

Since, based on normal life experience and the circumstances in this case there is a strong presumption regarding M1's public availability, the latter cannot be put in doubt by unsubstantiated allegations for example that there *might* have been confidentiality agreements. Not only would it be exceedingly difficult if not impossible to prove the general non-existence of such agreements (*negativa non sunt probanda)* - ultimately the burden of proof in this case lies with the Respondent.

4.3 Consequently, the Board concludes that M1 has been made available to the public before the priority date of the patent and forms therefore part of the prior art according to Article 54(2) EPC.

5. **Main Request - Inventive Step**

5.1 In chapter 3 M1 describes the various functions of the monitoring and management system ("Betriebsführungssystem") of the E-66 turbine. This includes start and stop procedures (section 3.7) including automatic stops or trips resulting from malfunctions. Sections 3.15 to 3.19 are of particular interest as they describe automatic stopping (tripping) and restarting (resetting). Section 3.17, for example relates to monitoring temperature of a wide variety of components, while section 3.19 concerns monitoring of net voltage and frequency. Both describe automatic tripping for excess values and automatic restart procedures, see 3.17, penultimate paragraph and 3.19.

5.1.1 It will be apparent from the above that the management system of M1 receives a large amount of operational information characteristic of the turbine, which it then processes or analyses to offer differentiated fault resolution procedures. In particular the system software differentiates between different types of fault and how to resolve them, some being automatically reset after tripping while others require intervention of service personnel before the turbine can be restarted. In this sense the system software is configured to decide and determine from the operational parameters that a fault causing a trip has occurred and what the nature of the fault is so that it can then decide appropriate action depending on the nature of the fault. At software or logic level it necessarily does so in accordance with rules that are programmable, i.e. configurable.

5.1.2 Thus, in sections 3.17 and 3.19 temperature of components or net voltage and frequency is received and analysed to determine the nature of the fault (excessive temperature, net voltage or net frequency variations), which caused the wind turbine to trip. Such a fault (abnormal temperature of a component) is effectively qualified as transient and resettable as opposed to other faults that are not resettable, cf. sections 3.16 vibration monitoring, 3.18 generator gap variation, 3.20 transformer faults; 3.21 fuse faults. If the system identifies the fault as one that is

resettable a reset procedure is automatically carried out and the turbine is restarted.
Resettability in this case is decided if the temperature has returned below a predetermined threshold value within some time interval following the trip (naturally the system will not wait forever). If so, the wind turbine is immediately reset.

5.1.3 In the case of a net voltage or frequency induced trip as described in section 3.19 a similar process is carried out. Thus in response to an excess voltage trip the system will first determine whether the voltage has come back within the allowable threshold values within some time interval following the trip. However, in this case the system logic prescribes that additional sensor data is required in particular to determine whether the voltage remains stable within the threshold values for several minutes. It moreover also requires additional historic voltage data up to the trip to determine whether within the last 24 hours a predetermined maximum number of net incidents has not been exceeded.

Only then, after the system has received the requested additional operational information and verified that the additional criteria are met, it determines that the turbine can now be reset, i.e. that based on this additional information the fault is resettable. The wind turbine is then reset.

5.2 In comparison to the method of claim 1, the only difference identified by the Board is that the requested additional operational information up to the trip is not disclosed to comprise *sensor data*, such as a log file of voltages measured during the last 24 hours. In M1, section 3.19 it suffices to merely count the number of voltage related grid events.

Concerning the time interval after a trip as in the final feature of claim 1, similar to most examples of the patent specification cited in section 3.3, above, the faulty operational parameter appears to be monitored according to M1 until it has returned into an allowable range between threshold values. It seems highly unrealistic if this monitoring were not limited by some kind of time-out, and the wind turbine simply stayed stopped in case of special circumstances, which exceptionally might prevent a normalisation of a usually transient fault. Such implicit time-out periods can also be considered as time intervals after the trip in the sense of claim 1.

5.3 In the Board's view the use of sensor data rather then simply counting trip events does not involve an inventive step.

The Board is unable to associate any particular technical effect with this difference other than that it might represent an alternative way of determining the number of trips. Thus the associated objective technical problem can be formulated as providing an alternative way of counting trips caused by net faults.

The person skilled in the art is aware of several obvious alternatives as well as their respective advantages and drawbacks. Evaluating a log file with voltage sensor data is one option even if it might take longer. What is more efficient might also depend on the algorithm of decision making, whether in the above example the criteria "threshold value" and "number of faults" are always checked in parallel, or "number of faults" only in the affirmative of the criterion "grid stabilisation".

The person skilled in the art would thus choose among the known alternatives according to the circumstances as a matter of normal practise.

5.4 The Respondent claims as technical effect of an analysis based on sensor data the *possibility* of taking into account further aspects beyond a mere number of occurrences and thus providing a more detailed and more accurate analysis of the fault. This would also be advantageous in case the fault could not be determined as resettable, so that a more detailed fault analysis log could be made available to service personnel, as in step 422 of Fig. 4.

Whilst all these options might be encompassed by claim 1, its method is not limited to them. It includes also completely basic and simple sensor data analysis such as counting voltage surges. Regardless, considering and evaluating sensor data of various operational parameters up to a wind turbine trip in order to determine the exact cause of the trip is part of routine fault analysis, as acknowledged in the patent itself, see paragraph [0004] of the patent specification.

5.5 Since for the above reasons realising the differing feature of claim 1 would be obvious for the person skilled in the art, the method of claim 1 does not involve an inventive step in the sense of Article 56 EPC. The main request thus fails.

6. **Auxiliary Requests - Inventive Step**

6.1 Auxiliary request 1

M1 discloses e.g. temperature and voltage (see above) as specific values of operational characteristics or parameter. Thus at least one of the possible forms the operational information might take as now listed in claim 1 is already known from M1.

6.2 Auxiliary Request 2

In M1, the set of rules is configured based on operational characteristics of the wind turbine, such as permissible temperature of components and range of voltage.

The rule "maximum permissible frequency of occurrence" of a fault, such as grid event, can hardly be determined other than empirically on the basis of some form of fault analysis, for example by evaluating how many grid events within a time interval turned out to be effectively caused by a systematic, not only a transient error in the past. If not already implicit in M1, this further feature represents routine practice.

6.3 Auxiliary request 3

The ranges of permissible temperatures and voltages described in M1 can be considered as heuristic data, engineering data for the wind turbine and wind turbine configuration data, and are thus also already known from M1.

6.4 Auxiliary request 4

According to the Respondent, a change or reconfiguration of rules is generally not foreseen in M1, let alone a reconfiguration based on a comparison of a fault log analysis and an operating configuration as claimed.

It appears that changing the manual M1 as well as the configuration of the wind turbine E-66 /20.70 was not generally excluded, see page 2 "Änderungsvorbehalt". With regard to the operational parameter voltage, threshold values are configured ("eingestellt") as rules before putting a wind turbine into operation (see page 39, chapter 3.19). On page 53 of M1, the menu "Netzparameter" is described. All the threshold or nominal values for grid voltage, minimal voltage, maximal voltage, voltage at which the power output is reduced and frequencies can be configured by service personnel when entering a service code (bridging paragraph of pages 53/54).

In the Board's view it is a quite common approach for a service engineer when looking for the cause of frequent trips due to grid events (second paragraph of chapter 3.19 on page 39) to compare the faults logs and his analysis of these logs with the operating configuration of the wind turbine set in the menu "Netzparameter". If the wind turbine trips frequently because the grid voltage rises briefly and slightly above the maximum threshold value of 245V before stabilising again within the permissible range, an obvious remedy avoiding these trips would consist in setting the maximum voltage to a slightly higher value, e.g. +7,5% or 247V.

The claimed reconfiguration or adaptation of rules based on observation belongs to the normal practise of a service engineer. Nor does the mere automation of such routine practice involve an inventive step, see CLBA 2019 I.D.9.19.5.

6.5 Auxiliary request 5

According to M1, chapter 3.19, current voltage values are monitored as additional operating condition after a first stabilisation of the grid has been determined.

6.6 Auxiliary requests 6 and 7

As is evident from chapter 3 M1 deals with component faults that are resettable, as the example of section 3.17 cited above clearly shows.

Moreover, also taking into account the frequency of occurrence of a fault is a concept well known for other type of faults such as grid events (chapter 3.19 of M1) or overspeed (chapter 3.15 of M1). It is obviously also suitable for protecting wind turbine components from excessive operating temperatures, as stated in the first paragraph of chapter 3.17, since it could prevent repeated and pointless resets in case of defective ventilators for controlling temperature and/or temperature sensors (second, third and penultimate paragraph of chapter 3.17).

6.7 The features added to claim 1 of the auxiliary requests 6 and 7 are thus either already known from M1 or represent routine practice. They thus fail to render the subject-matter or claim 1 inventive over M1. Consequently, these requests also fail.

7. **Conclusion**

With their appeal, the Opponents successfully challenge the findings of the Opposition Division according to which the method of claim 1 as granted (main request) involved an inventive step. Consequently, the Opposition Division's decision to reject the oppositions cannot be upheld.
Taking into consideration the amendments made in auxiliary request 1-7, the method of claim 1 still does not meet the requirement of inventive step according to Article 56 EPC, which must lead to the revocation of the patent under Articles 101(3)b) and 111(1) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated