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Datasheet for the decision of 8 November 2024

Case Number: T 1182/22 - 3.4.02

Application Number: 11796987.3

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Language of the proceedings: EN

Title of invention:

Black start of wind turbine devices

Patent Proprietor:

Siemens Gamesa Renewable Energy A/S

Opponent:

Vestas Wind Systems A/S

Relevant legal provisions:

EPC Art. 100(c), 100(a), 54, 56

Keyword:

Grounds for opposition - added subject-matter (no) Novelty - main request and first auxiliary request (no) second auxiliary request (yes) Inventive step - second auxiliary request (yes)



Beschwerdekammern Boards of Appeal

Chambres de recours

Boards of Appeal of the European Patent Office Richard-Reitzner-Allee 8 85540 Haar GERMANY Tel. +49 (0)89 2399-0

Case Number: T 1182/22 - 3.4.02

DECISION

of Technical Board of Appeal 3.4.02 of 8 November 2024

Appellant: Siemens Gamesa Renewable Energy A/S

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7330 Brande (DK)

Representative: SGRE-Association

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Respondent: Vestas Wind Systems A/S

(Opponent) Hedeager 44

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Representative: Inspicos P/S

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Decision under appeal: Decision of the Opposition Division of the

European Patent Office posted on 1 March 2022 revoking European patent No. 2619870 pursuant to

Article 101(3)(b) EPC.

Composition of the Board:

Chairman G. Flyng

Members: C.D. Vassoille

W. Ungler

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Summary of Facts and Submissions

- I. The appeal of the patent proprietor lies against the decision of the opposition division revoking European patent no. 2 619 870.
- II. The following documents are relevant for this decision:

D1: EP 1 909 371 A2

D1*: US 7,394,166 B2 (family member of D1)

D3: EP 1 993 184 A1 D4: EP 2 236 821 A1

- III. In the contested decision, the opposition division concluded that the ground for opposition under Article 100(c) EPC did not prejudice the maintenance of the patent as granted. However, the subject-matter of claim 1 of the main request was considered to lack novelty in view of document D3. Furthermore, the subject-matter of claim 1 of the first, second, and third auxiliary requests was found to lack novelty over document D4.
- IV. The parties were summoned to oral proceedings. In a communication under Article 15(1) RPBA, the board informed the parties inter alia of its preliminary view according to which the ground for opposition under Article 100(C) EPC did not prejudice the maintenance of the patent as granted, the ground for opposition under Article 100(a) EPC in combination with Article 54 EPC did prejudice the maintenance of the patent as granted and the subject-matter of claim 1 of the first auxiliary request appeared to be new with respect to document D4.

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V. Oral proceedings before the board were held on 8 November 2024.

The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained as granted (main request), or that the patent be maintained in amended form according to one of the first to third auxiliary requests all filed with letter of 30 August 2021 and refiled with the statement of grounds of appeal. Additionally, the appellant requested remittal to the opposition division for further examination of the auxiliary requests and adaptation of the description.

The respondent (opponent) requested that the appeal be dismissed.

- VI. Claim 1 of the **main request** (patent as granted) has the following wording (feature numbering in square brackets added by the board):
 - "[1.1] Wind turbine device (102) comprising
 - [1.2] a power output (166) of the wind turbine device (102) coupleable to an electricity network (104);
 - [1.3] a coupler (168); and
 - [1.4] a power unit (164) adapted to provide a predetermined voltage to the power output (166) via the coupler (168) when the coupler (168) is in a coupled state
 - [1.5] in case of a black-out of the electricity network (104),

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- [1.6] the predetermined voltage imitating the electricity network (104) in its running state."
- VII. Compared to claim 1 of the main request, claim 1 of the first auxiliary request includes the following additional features (feature numbering in square brackets added by the board):
 - "[1.7] a turbine transformer (122);
 - [1.8] the coupler (168) being configured for coupling the power unit (164) to the wind turbine side (121) of the turbine transformer (122)."
- VIII. Compared to claim 1 of the first auxiliary request, claim 1 of the **second auxiliary request** includes the following additional features (feature numbering in square brackets added by the board):
 - "[1.9] a converter device (160) for receiving power generated by the wind turbine (102, 402, 502) and providing, in response hereto, a converted AC power at a converter output (166); and
 - [1.10] a phase controller (172) for synchronizing the phase angle (ϕ) of the converted power with the phase angle $(\phi1)$ of the predetermined voltage provided by the power unit (164)."

Claims 2 to 6 are dependent on claim 1.

Claim 7 refers to a method of blackstarting a wind turbine device according to claim 1.

Claims 8 to 11 are dependent on claim 7.

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Claims 12 and 13 refer to a computer program for controlling a wind turbine device and a wind park, respectively, which when executed is adapted for controlling the method of claims 7 to 9 and the method of claim 10 or 11, respectively.

- IX. In view of the board's decision on the second auxiliary request, it was not necessary to repeat the wording of the third auxiliary request at this point.
- X. The appellant essentially argued that features 1.4 and 1.6 of claim 1 of the main request, and thus providing a predetermined voltage to the power output of the wind turbine device which imitates the electricity network in its running state, was not directly and unambiguously derivable from document D3.

The appellant further argued that document D4, and document D1* which D4 cites, did not disclose feature 1.8 of claim 1 of the first auxiliary request.

Additionally, the appellant argued that the subject-matter of claim 1 of the second auxiliary request was new and not rendered obvious by the teaching of document D4 with D1* in combination with the common general knowledge of the skilled person.

XI. The respondent argued that the additional feature "in a coupled state" in claim 1 of the main request constituted an unallowable intermediate generalisation and that the ground for opposition under Article 100(c) EPC thus prejudiced the maintenance of the patent as granted.

The respondent further argued that feature 1.6 of claim 1 of the main request was to be interpreted broadly,

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which led to the conclusion that document D3 anticipated the subject-matter of claim 1 of the main request.

The subject-matter of claim 1 of the first auxiliary request was considered by the respondent not to be new in view of document D4.

Furthermore, the respondent argued that the subjectmatter of claim 1 of the second auxiliary request was not new or was at least obvious in view of document D4 in combination with the common general knowledge of the person skilled in the art.

The detailed arguments of the parties are discussed in the reasons for the present decision below. - 6 - T 1182/22

Reasons for the Decision

1. Main request - Article 100(c) EPC

- 1.1 The ground for opposition under Article 100(C) EPC does not prejudice the maintenance of the patent as granted.
- 1.2 Feature 1.4 of claim 1 of the main request specifies that the wind turbine device comprises "a power unit (164) for providing adapted to provide a predetermined voltage to the power output (166) via the coupler (168) when the coupler (168) is in a coupled state..." (amendments to the originally filed claim 1 highlighted by the board).
- of the coupler, as recited in feature 1.4 of claim 1 of the main request, was disclosed in the original application only in connection with further features of the specific embodiments of figures 2 and 3. Extracting this feature in isolation therefore constituted an unallowable intermediate generalisation. This objection in principle also applied to each of the auxiliary requests.
- 1.4 The board is not convinced by the respondent's argument. There can be no doubt that a person skilled in the art would have understood that the coupler must necessarily be in a coupled state in order to provide a predetermined power to the power output. The original description (reference is made to the international publication WO 2012/139667 A1) discloses on page 2, lines 15 to 17 that, in an embodiment, the coupler has a decoupling state in which the power unit is disconnected or, in another embodiment, decoupled from

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the power unit [sic]". In view of this disclosure, there is no doubt that a person skilled in the art would have understood that the coupler must necessarily be able to transition to the opposite state, i.e. to a coupled state. A corresponding understanding is also fully supported by the embodiments of the original application as illustrated in figures 2 and 3 and the corresponding description, in particular on page 14, lines 5 to 8, reciting "a power unit (164) [...] for providing a predetermined voltage to a power output (166) of the wind turbine device via a coupler...".

- 1.5 For the sake of completeness, reference is also made to page 17, lines 6 to 11, where it is explicitly disclosed that in the second state of the coupler the power unit is decoupled from the power output and hence not coupled to another wind turbine device nor to the electricity network, as indicated by the open switches 186 and 190 in figures 2 and 3. It is then evident that in order to provide power to the power output, the coupler must be in a coupled state.
- 1.6 Feature 1.4 as amended in claim 1 of the main request therefore does not contain any technical teaching that goes beyond what the person skilled in the art could already have implicitly, but directly and unambiguously, inferred from the originally filed claim 1 in conjunction with the original description, in particular on pages 2, 14 and 17 as well as figures 2 and 3. Consequently, it does not constitute an inadmissible amendment or, in particular, an unallowable intermediate generalisation of the original disclosure.
- 1.7 In the light of the above considerations, the board arrived at the conclusion that the ground for

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opposition under Article 100(c) EPC does not prejudice the maintenance of the patent as granted.

2. Claim interpretation

- 2.1 The present case essentially hinges on the question of how feature 1.6 of claim 1 of all requests is to be interpreted.
- The patent does not describe what exactly is meant by "the predetermined voltage imitating the electricity network (104) in its running state". The person skilled in the art is thus confronted with the absence of any detailed description of the specific characteristics that might exist for a predetermined voltage that imitates the electricity network in its running state according to feature 1.6 of the patent.

It was therefore first necessary to interpret the wording of feature 1.6 in the context of the claimed subject-matter and the general teaching of the patent from the perspective of a person skilled in the art in the field of wind turbines.

2.3 The appellant essentially argued that the skilled person would in any event have attributed to the expression "the predetermined voltage imitating the electricity network (104) in its running state" a technical meaning going beyond the mere provision of a suitable start-up voltage to the power output of the wind turbine. The term "imitating" was to be understood in its normal sense, i.e. that the voltage acted in such a way that the wind turbine was in a situation as if the electricity network were present.

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- 2.4 The respondent essentially argued that "imitating" in the context of the patent had to be understood in a functional sense, i.e. that the predetermined voltage which imitated the electricity network in its running state was capable of performing the same functions as the electricity network. They also argued that the function of the electricity network in its running state was to provide the power needed to start-up the wind turbine. When the electricity network was not running, the power needed to start-up the wind turbine had to be provided by an alternative power source. The wording of feature 1.6 of claim 1 therefore had to be interpreted broadly so that the predetermined voltage provided by the power unit imitated the electricity network in its running state in the sense that the power unit provided the start-up power which was normally provided by the electricity network.
- 2.5 The board agrees with the respondent's arguments. Claim 1 requires that the predetermined voltage is such that the "running state" of the electricity network is "imitated". This feature is, as argued by the respondent, exclusively disclosed in the patent in the context of the start-up of the wind turbine. There is nothing in the patent to indicate to a person skilled in the art that a predetermined voltage imitating the electricity network is to be understood in a wider context. In particular, nothing in the patent implies a special configuration of the power unit in the sense that it deliberately adjusts the predetermined voltage by taking into account the actual characteristics of the electricity network as it was before the blackout, in a manner that replicates the electricity network.

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2.6 Paragraph [0011] of the patent states the following:

"According to an embodiment, imitating the electricity network allows to operate and control the wind turbine device until the electricity network is again in its running state. Hence in such an embodiment allows to control the wind turbine device and supply electrical power generated from wind power to auxiliary devices of the wind turbine device."

Furthermore, paragraph [0008] of the patent states the following:

"This aspect is based on the idea that a good controlability of the wind turbine device is provided if the wind turbine device is run with a simulated electricity network. According to embodiments of the herein disclosed subject matter the black start characteristics of the wind turbine device and, in other embodiments, the black start characteristics of the wind park comprising the wind turbine device is improved."

In these relevant passages of the patent, an imitation of the electricity network by the predetermined voltage is thus disclosed exclusively in the context of the blackout of the network and the start-up of the wind turbine.

2.7 In conclusion, the board finds no basis for a skilled person to interpret "imitating the electricity network (104) in its running state" as having any meaning beyond the conventional start-up function of the electricity network in its running state. Hence, an appropriate interpretation of feature 1.6 does not

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extend beyond the typical function of a power unit providing the predetermined voltage, which is essentially to replace the role of the electricity network in starting the wind turbine.

2.8 A narrower interpretation of claim 1, in particular with regard to the specific properties of the supplied voltage is not justified and the appellant has not provided any convincing arguments in this regard.

3. Main request - Article 100(a) EPC in combination with Article 54 EPC

- 3.1 The subject-matter of claim 1 of the main request is not new in view of document D3.
- 3.2 Document D3 directly and unambiguously discloses all features of claim 1 of the main request. In particular, document D3 directly and unambiguously discloses a coupler (CB3-CBx) and a power unit (local power source 6). Furthermore, the local power source (6) is adapted to provide power to a power supply line (7) and thus to the power output of the wind turbine device (4). As disclosed for example in paragraphs [0002] and [0022] of document D3, electrical power for start-up of the wind turbine device is normally provided by the electricity network. Furthermore, paragraphs [0007], [0008], [0024], [0026] and [0032] of document D3 disclose that the wind turbines are started up by using the electrical power provided by the local power source (6), which is connectable to the power supply line (7) by the circuit breaker (CB3).
- 3.3 The appellant essentially argued that in document D3 a distinction was made between power and voltage.

 Reference was made in particular to paragraphs [0002]

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and [0022] of D3. According to the appellant, it followed from these passages that document D3 provided a power to the power line and that providing a predetermined voltage to the power output was therefore not directly and unambiguously derivable from D3.

- 3.4 In accordance with the interpretation of claim 1 of the main request as set out in point 2. above, the local power source (6) of document D3 evidently imitates the electricity network in its running state in the sense that it provides a predetermined voltage, which is required in order to start-up the wind turbine device, and which is normally provided by the electricity network. The fact that document D3 appears to make a distinction in some passages between voltage and power (see e.g. paragraph [0002]: "the voltage and/or the power") does not contradict this finding. As argued by the respondent, the provision of a power in any case presupposes the provision of a voltage. Furthermore, it is evident that a voltage supplied to the power supply line (7) must be suitable for starting up the wind turbine, and thus must at least in that sense be predetermined. The predetermined voltage provided by the local power source thus imitates the electricity network in its running state within the meaning of feature 1.6 of claim 1 of the main request, i.e. in the sense that it provides a suitable start-up power to the power output of the wind turbine device.
- 3.5 It is further directly and unambiguously derivable from document D3 that the power unit provides the power, and hence the predetermined voltage, to the power output of the wind turbine device. The appellant argued that figure 1 of D3 was merely schematic in nature and the mere disclosure of providing power to the wind turbine

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did not imply where and how the power was routed to which components in the wind turbine.

- 3.6 The board agrees with the respondent that figures 1 and 2, in conjunction with the associated description, would have been understood by a skilled person to mean that the same cables (power supply lines 7) are used for the power supply from the wind turbine device to the electricity network in normal use and for the power supply from the local power source to the wind turbine device for start-up in the event of a blackout. There is therefore no doubt that the skilled person would directly and unambiguously have derived from document D3 that the local power source (6) provides the predetermined voltage via the circuit breakers (CB3 to CB_x) and the power supply line (7) to the wind turbine device (4), which thus corresponds to the output of a wind turbine device.
- 3.7 Consequently, although figures 1 and 2 of document D3 are schematic in nature, the disclosure of document D3 as a whole would have been unambiguously understood by a person skilled in the art as providing a predetermined voltage from the power supply unit (local power source 6) to the power output (power supply line 7) of a wind turbine device (4), wherein the predetermined voltage imitates the electricity network in its running state.
- 3.8 In the light of the above considerations, the board came to the conclusion that the subject-matter of claim 1 of the main request is not new in view of document D3. The ground for opposition under Article 100(a) EPC in combination with Article 54 EPC therefore prejudices the maintenance of the patent as granted.

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4. First auxiliary request - Novelty (Article 54 EPC)

- 4.1 The subject-matter of claim 1 of the first auxiliary request is not new in view of document D4.
- The respondent's main argument was essentially based on figure 2 of document D4, as well as paragraph [0029], which cites the US patent publication referred to herein as D1*. The US patent D1* was granted in respect of the US patent application which document D1 claims priority. Document D1 was cited in the international search report and referred to in the contested decision. The disclosure of D1 has been agreed by the parties to correspond in relevant parts to D1*.
- The respondent argued that paragraph [0029] of document D4 included a description of figure 3B and, in particular, stated that after the formation of an islanded local grid, a selected wind turbine initiated a black start procedure which was described as being generally known, e.g. from D1 (see figure 4 and paragraph [0035]). Furthermore, in document D1, a storage element (20, 21) was connected to a DC-link of the converter, and thus, at the power output of the wind turbine device and at the wind turbine side of the transformer.
- 4.4 The board arrived at the conclusion that document D4 in combination with the disclosure of document D1* discloses all features of claim 1 of the first auxiliary request.

Paragraph [0029] of document D4 includes a description of figure 3B and, in particular, states that after the formation of an islanded local grid, a selected wind turbine initiates a black start procedure which is

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described as being generally known, e.g. from D1*.

It was not in dispute between the parties that in document D1*, a power output of an energy storage (21) is coupled to the DC link of a power converter (30) (see in particular D1*, figure 4 and column 5, lines 6 to 17). In the board's view, the skilled person, reading paragraph [0029] of document D4 would thus immediately have understood that, in order to initiate the black start procedure, the auxiliary power distribution system (220) shown in figure 2 of D4 must be connected to the uninterruptable power supply (UPS, 234) via a power supply switch (232) and additionally to the DC link of the converter (204). In this configuration, the coupler (232) may be considered as being configured to couple the power unit (234) to the wind turbine side of the turbine transformer (206) via the auxiliary power distribution system (220). According to paragraph [0015] of the patent, the wind turbine side of the turbine transformer is the side that is coupled or coupleable to the wind turbine generator. In the board's view, this definition includes the DC link of converter (204) of document D4.

- 4.5 The appellant argued that a corresponding teaching of document D4 would not result in the power unit (UPS 234) being connected to the wind turbine side of the transformer, contrary to feature 1.8, because the power output was not connected to the AC output of the converter (204).
- 4.6 The board cannot agree with the appellant on this point. Paragraph [0055] of the granted patent states the following:

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"According to an embodiment, the power output 166 is the AC output of the DC/AC converter 160. However, it should be understood that this is merely exemplary and according to other embodiments, the power output may be provided at any other point of the power path in the wind turbine device 102. However, it should be understood that the level of the predetermined voltage is adapted to the selected power output, such that the predetermined voltage imitates the electric network in its running state. According to an embodiment, the power output 166 of the wind turbine device is electrically coupled to the turbine side 121 of the device transformer 122, e.g. by an electrical line 159." (emphasis added by the board)

- 4.7 Claim 1 of the first auxiliary request does not contain a definition of the power output. It is therefore not limited to a particular position at the AC output of the converter. This understanding of claim 1 of the first auxiliary request is fully supported by paragraph [0055] of the patent quoted above. Therefore, the power output within the meaning of claim 1 can reasonably be understood as being located at the DC link of the converter, which corresponds to a point of the power path in the wind turbine device, and which is evidently also on the wind turbine side of the wind turbine transformer (206).
- 4.8 In the light of the above considerations, the board arrived at the conclusion that the subject-matter of claim 1 of the first auxiliary request lacks novelty over document D4 in combination with document D1*.

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5. Second auxiliary request - Novelty (Article 54 EPC)

- 5.1 The subject-matter of claim 1 of the second auxiliary request is new with regard to document D4.
- 5.2 Claim 1 of the second auxiliary request, according to feature 1.10, additionally requires a phase controller for synchronising the phase angle of the converted power with the phase angle of the predetermined voltage provided by the power unit. It was undisputed that feature 1.10 implicitly limits the predetermined voltage to be an AC voltage, since otherwise it could have no phase angle.
- 5.3 The respondent essentially argued that every wind turbine necessarily comprised a phase controller capable of synchronising the AC output of the converter with the phase of the electricity network or with the phase of any other AC voltage signal.

Furthermore, the respondent argued that document D4 in paragraph [0024] disclosed that the UPS could be a diesel generator. Since a diesel generator was known to generate an AC voltage, it was implicit in document D4 that the AC voltage from the diesel generator had to be coupled to the AC output of the converter (204) and its phase synchronised with the phase of the converter output.

5.4 The board is not convinced by the respondent's arguments. The appellant correctly explained that the "predetermined voltage" in features 1.4, 1.6 and 1.10 of claim 1 is the same voltage throughout and thus, as implicitly follows from feature 1.10, an alternating voltage.

5.5 As the board has already found in relation to claim 1 of the first auxiliary request, document D4, by explicitly referring to the black start procedure described in document D1*, directly and unambiguously discloses the initiation of a black start procedure in the wind turbine in which a DC voltage is supplied to a DC link. In document D4, no other type of black start procedure is described, either implicitly or explicitly. In particular, no other connection between the power unit (UPS 234) and a power output of the wind turbine is described than the connection with the DC link as disclosed in D1*.

If the UPS (234) is a diesel generator and as such supplies an alternating voltage, the person skilled in the art would have immediately understood that this AC voltage must first be rectified before the power unit (UPS 234) and in particular the auxiliary distribution system (220) can supply the voltage to the DC-link of the converter (204). In document D4, there is therefore no need to synchronise the phase of an AC voltage with the phase of the AC voltage at the output of the converter (204).

Consequently, even if it were considered that the phase controller as defined in feature 1.10 merely has to have the ability to synchronise two phases, feature 1.10 implicitly but clearly defines the predetermined voltage as an AC voltage. It is also clear from claim 1 that the predetermined (AC) voltage provided by the power unit must necessarily be coupled to an AC power output of the wind turbine device, in particular the AC output of the converter. However, document D4 lacks a direct and unambiguous disclosure of an AC voltage coupled to an AC power output of a wind turbine device as required by feature 1.4 when read in combination

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with feature 1.10. On the contrary, as stated above, the only direct and unambiguous teaching that the skilled person can derive from D4, in combination with the disclosure of D1*, is the provision of a DC voltage to a DC link of the converter (204).

- 5.7 The board also notes that a phase controller that can be regarded as implicitly disclosed in document D4 does not in any case have a means of detecting the phase of an AC predetermined voltage.
- 5.8 In the light of the above considerations the board concluded that document D4 does not disclose the combination of features 1.4 and 1.10 of claim 1 of the second auxiliary request and that the subject-matter of claim 1 is therefore new within the meaning of Article 54 EPC.

Second auxiliary request - Inventive step (Article 56 EPC)

Admittance

The board decided to admit the objection under Article 56 EPC against claim 1 of the second auxiliary request into the appeal proceedings. This decision was based on the fact that the objection arose directly from the discussion of the novelty of the subject-matter of claim 1 of the second auxiliary request with regard to document D4 in connection with D1*. It was therefore to be regarded as part of a normal procedural development. Furthermore, although the respondent did not raise a separate inventive step objection against claim 1 of the second auxiliary request in the reply to the

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appeal, the observation was made in point 7.8 of the reply to the appeal that it would have been obvious to use a phase controller to synchronise the phase angle of the converted power with that of the predetermined voltage provided by the power unit.

Against this background, the board considered it appropriate to address the objection under Article 56 EPC in the appeal proceedings in order to ensure a thorough assessment of all relevant aspects of the second auxiliary request.

Substantive discussion

- 6.3 The subject-matter of claim 1 of the second auxiliary request involves an inventive step in view of document D4.
- 6.4 The respondent essentially argued that the teaching of document D1* was limited to a direct connection between the storage element and the DC link, and that the skilled person would therefore not have understood document D4 in connection with D1* to imply that a converter must be provided if the power unit (UPS 234) provides an AC voltage. In particular, document D1* indicated that the power could also be supplied by a diesel generator (see column 3, lines 31 to 40). However, the embodiment shown in figure 4 of D1* only referred to a battery that could be connected directly to the DC link without a converter. Document D1* did not include a specific embodiment of a diesel generator as a power source and, therefore, a converter to convert an alternating predetermined voltage to a DC voltage could not be read into document D4.

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The respondent further argued that if the UPS (234) in document D4 was a diesel generator, as disclosed in paragraph [0024] of D4, the skilled person would have realised that an AC voltage could not be provided to the DC link and they would therefore have sought alternatives to supply the alternating predetermined voltage to the power path of the wind turbine.

The objective technical problem would therefore be how to start up the wind turbine when the UPS (234) provides an alternating (AC) predetermined voltage. The skilled person would then have immediately realised that the alternating predetermined voltage must be provided at a suitable point in the power path of the wind turbine device. For a person skilled in the art, only the point between the converter (204) and the turbine transformer (206) could reasonably be considered as such a point. In this case, the phase of the converter output would necessarily have to be synchronised with the phase of the alternating predetermined voltage provided by the UPS (234).

6.5 The board carefully considered the respondent's arguments but is not convinced by them.

Irrespective of the question of how the objective technical problem is to be formulated, the board came to the conclusion that in a scenario using a diesel generator, a person skilled in the art would have considered the provision of a converter for converting the AC voltage from a diesel generator into a DC voltage suitable to be fed into the DC link as disclosed in D1*. The combination of features 1.4 and 1.10 was therefore not obvious to a skilled person starting from D4, taking into account the teaching of D1*.

6.6 Even if document D1* does not explicitly disclose a converter for an AC voltage produced by a diesel generator, it is at least clear to a person skilled in the art from document D1* that the power source must be connected to the DC link, since this is the only solution for the black start procedure disclosed in that document. A person skilled in the art would therefore have immediately understood from D1* that, in order to supply an AC voltage from a diesel generator to a DC link, the AC voltage must first be rectified by means of a suitable converter.

Thus, even if the problem-and-solution approach were to be based on the objective technical problem formulated the respondent, the board comes to no other conclusion than that the person skilled in the art would at least have had two alternatives to choose from, and that, having regard to the disclosure of D1*, which is expressly included in D4, the person skilled in the art would have chosen the solution compatible with the black start process described in D1*. That is to say, providing a DC voltage to the DC link of the wind turbine converter (204). As the appellant rightly pointed out, the alternative of feeding the predetermined AC voltage in the direction of the transformer (222) constitutes a reversal of the direction of the power flow, since this transformer usually serves to provide power from the electricity network during the normal operation of the electricity network. There is no reference in D4 or D1* to a corresponding reverse direction of power flow, i.e. feeding power back from the auxiliary power supply (220) to the transformer (222).

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6.7 In the light of the above considerations, the board concluded that the subject-matter of claim 1 of the second auxiliary request involves an inventive step under Article 56 EPC with respect to document D4.

No further objections were raised or maintained by the respondent against the second auxiliary request.

7. Remittal

- 7.1 The appellant requested remittal to the opposition division for further examination of the auxiliary requests and adaptation of the description.
- 7.2 According to Article 11 RPBA, the board shall not remit a case to the department whose decision was appealed for further prosecution, unless special reasons present themselves for doing so. In the present case, no special reasons were apparent and none were raised by the appellant. The board therefore exercised its discretion under Article 11 RPBA to decide itself on the first and second auxiliary requests.
- 7.3 However, this does not apply to the appellant's request for remittal in order to adapt the description. The board has the impression that adjustments need to be made in the description in the light of the amendments made in the second auxiliary request, but that these require a detailed analysis and therefore a remittal for this purpose seemed appropriate.

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Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.
- 2. The case is remitted to the opposition division with the order to maintain the patent in amended form with the following claims and a description to be adapted thereto:

Claims 1 to 13 of the second auxiliary request filed with the statement setting out the grounds of appeal.

The Registrar:

The Chairman:



D. Meyfarth

G. Flyng

Decision electronically authenticated