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Datasheet for the decision of 14 June 2017

Case Number: T 0486/13 - 3.2.04

Application Number: 03816335.8

Publication Number: 1611351

IPC: F03D11/04, F03D11/00

Language of the proceedings: EN

Title of invention:
METHOD OF MOVING THE ROTATING MEANS OF A WIND TURBINE DURING TRANSPORTATION OR STAND STILL, NACELLE, AUXILIARY DEVICE, AND USE THEREOF

Patent Proprietor:
Vestas Wind Systems A/S

Opponents:
ENERCON GmbH
GE Wind Energy GmbH

Headword:

Relevant legal provisions:
EPC Art. 56, 123(2)
RPBA Art. 12(4), 13

Keyword:
Inventive step - (no)
Amendments - allowable (no)
Late-filed request

Decisions cited:

Catchword:

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Case Number: T 0486/13 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 14 June 2017

Appellant: (Patent Proprietor)	Vestas Wind Systems A/S Hedeager 42 8200 Aarhus N (DK)
Representative:	Inspicos P/S Kogle Allé 2 2970 Hørsholm (DK)
Appellant: (Opponent 2)	GE Wind Energy GmbH Holsterfeld 16 48499 Salzbergen (DE)
Representative:	Zimmermann & Partner Patentanwälte mbB Postfach 330 920 80069 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 12 December 2012 concerning maintenance of the European Patent No. 1611351 in amended form.**

Composition of the Board:

Chairman	A. de Vries
Members:	G. Martin Gonzalez
	C. Heath

Summary of Facts and Submissions

I. The appellant-proprietor lodged an appeal, received on 20 February 2013, against the interlocutory decision of the Opposition Division of the European Patent Office posted on 12 December 2012 concerning maintenance of the European Patent No. 1611351 in amended form and simultaneously paid the required fee. The statement of grounds of appeal was received on 22 April 2013.

The appellant-opponent (GE Wind Energy GmbH) likewise lodged an appeal, received on 20 February 2013, against said interlocutory decision and simultaneously paid the required fee. The statement setting out the grounds of appeal was received on 19 April 2013.

II. Two oppositions were filed based on Articles 100 (a), (b) and (c). Opponent Enercon GmbH subsequently withdrew their opposition.

In its written decision the opposition division held that the third auxiliary request satisfied the requirements of Article 123(2) EPC and that the claimed subject-matter was new and involved an inventive step having regard to the following documents:

(D2) EP 1 336 755 A1

(D4) HAU E., Windkraftanlagen, Springer-Verlag, 2. Auflage, 1996,, pp. 50 to 52

(D7) GB 782,022

(D8) DE 33 44 449 A1

(D9) GB 1 204 412

III. Oral proceedings were held on 14 June 2017.

IV. The appellant-proprietor requests that the decision under appeal be set aside and that the patent be maintained on the basis of the main request, or auxiliary request 1, both filed with letter dated 22 April 2013, or dismissal of the appeals (auxiliary request 2), or according to one of auxiliary request 3A filed at 10.15 during the oral proceedings before the Board, auxiliary request 4 filed with letter dated 5 September 2013, or auxiliary requests 5 – 6 filed at 13.07 during the oral proceedings before the Board.

V. The appellant-opponent requests that the decision under appeal be set aside and that the European patent be revoked.

VI. The wording of the relevant claims for the present decision reads as follows:

(a) MAIN REQUEST

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:

securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,

transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and

rotating said one or more shafts of the rotating means discontinuously from a position to another"

(b) FIRST AUXILIARY REQUEST

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:

securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,

transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and

rotating said one or more shafts of the rotating means discontinuously from a position to another

wherein said method activates one or more oil lubrication pumps supplying lubrication to said rotation means."

2. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:

securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able

to store, generate and/or convert energy during transportation,
transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and
rotating said one or more shafts of the rotating means discontinuously from a position to another,
wherein said auxiliary device (14) is connected to the high-speed shaft at a gear (17) and a generator (21) of the wind turbine (1)."

10. "Method of moving the rotating means of a wind turbine (1) according to claim 1 wherein the method is applied during stand still during transportation."

13. "Method of controlling the moving of the rotating means of a wind turbine during transportation or stand still during transportation according to claim 1 or . . ."

(c) AUXILIARY REQUEST 2

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:
securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,
connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,
transferring energy from said at least one auxiliary device (14) to one or more shafts (16,

19) of the rotating means during transportation, and

rotating said one or more shafts of the rotating means discontinuously from a position to another wherein said auxiliary device (14) is connected to the high-speed shaft at a gear (17) and a generator (21) of the wind turbine."

(d) AUXILIARY REQUEST 3A

1. "Method of moving the rotating means of a wind turbine (1) during transportation, wherein said rotating means is comprised in a nacelle (3) of the wind turbine (1), the nacelle defining an enclosed space, said method comprising the steps of:

connecting an auxiliary device (14) to said rotating means with connection means (15),

securing the at least one auxiliary device (14) to a fixed position in relation to said rotating means, and securing said auxiliary device. (14) to a fixed position in the nacelle with securing means (18, 28),

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,

transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and

rotating said one or more shafts of the rotating means discontinuously from a position to another, wherein said auxiliary device (14) is connected to the high-speed shaft at a gear (17) and a generator (21) of the wind turbine (1), and wherein said connection

means is a cardan coupling system (25) flexibly connecting the high-speed shaft ends (32) of the gear and the generator with said at least one auxiliary device (14)."

(e) AUXILIARY REQUEST 4

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:

securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,

transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and

rotating said one or more shafts of the rotating means discontinuously from a position to another

wherein said method activates one or more oil lubrication pumps supplying lubrication to said rotation means."

(f) AUXILIARY REQUEST 5

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:

securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,

connecting said at least one auxiliary device (14) to the rotating means at the transportation, said

least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,
transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and
rotating said one or more shafts of the rotating means discontinuously from a position to another

wherein said method activates one or more oil lubrication pumps supplying lubrication to said rotation means."

2. "Method of moving the rotating means of a wind turbine (1) during transportation, wherein said rotating means is comprised in a nacelle (3) of the wind turbine (1), the nacelle defining an enclosed space, said method comprising the steps of:

connecting an auxiliary device (14) to said rotating means with connection means (15)
securing the auxiliary device (14) to a fixed position in relation to said rotating means, and
securing said auxiliary device (14) to a fixed position in the nacelle with securing means (18,28),
connecting said auxiliary device (14) to the rotating means at the transportation, said auxiliary device (14) being able to store, generate and/or convert energy during transportation,
transferring energy from said auxiliary device (14) to the rotating means during transportation, and
rotating the rotating means discontinuously from a position to another,

wherein the rotating means are the high-speed shaft ends (32) of a gear (17) and a generator (21) of a wind turbine (1), and
wherein said connection means is a cardan coupling system (25) flexibly connecting the high-speed shaft ends (32) of the gear and the generator with said auxiliary device (l4)."

(g) AUXILIARY REQUEST 6

1. "Method of moving the rotating means of a wind turbine (1) during transportation, said method comprising the steps of:
securing at least one auxiliary device (14) to a fixed position in relation to said rotating means,
connecting said at least one auxiliary device (14) to the rotating means at the transportation, said least one auxiliary device (14) being able to store, generate and/or convert energy during transportation,
transferring energy from said at least one auxiliary device (14) to one or more shafts (16, 19) of the rotating means during transportation, and
rotating said one or more shafts of the rotating means continuously or discontinuously from a position to another,
wherein said method activates one or more oil lubrication pumps supplying lubrication to said rotation means."

VII. The appellant-opponent argued as follows:

The subject-matter of several auxiliary requests is divergent, especially independent claims of the 2nd and 3rd (3Ard) auxiliary requests as compared to the 4th

auxiliary request. Such diverging auxiliary requests are not admissible into the proceedings. Auxiliary requests 5 and 6 filed during the oral proceedings do not meet *inter-alia* the criteria of "clear allowability" required for such belated requests and are therefore not admissible.

The subject-matter of claim 1 of the main request is not patentable in view of documents D7-D9 and common general knowledge.

The claims of the auxiliary requests 1,2,3A and 4 contain subject-matter that extends beyond the contents of the application as filed, at least with regard to the features "during stand still during transportation" and "...auxiliary device (14) is connected to the high-speed shaft at a gear (17) and a generator (21)...".

The subject-matter of claim 1 of the 6^{th} auxiliary request lacks an inventive step in the light of common general knowledge and the teachings of D7, D8 or D9.

VIII. The appellant-proprietor argues as follows:

All auxiliary requests are admissible. They either form the basis of the appealed decision or are a fair response to arguments and developments of the substantive issues during the appeal procedure.

The subject-matter of claim 1 of the main request is inventive, as it addresses problems during transportation of wind turbine components. The general knowledge and teachings from other technical fields are not directly applicable in an obvious manner.

The application as filed unequivocally discloses that periods of stand still may occur during transportation, thus giving support to the feature "during stand still during transportation". The "and" alternative of originally filed claim 3 provides explicit literal support for the wording "...auxiliary device (14) is connected to the high-speed shaft at a gear (17) and a generator (21)..."

The subject-matter of claim 1 of auxiliary request 6 is inventive, because activating one or more oil lubrication pumps supplying lubrication during a method as the one claimed is neither taught nor suggested by the prior art.

Reasons for the Decision

1. The appeals are admissible.

2. Background of the invention

The claimed invention is aimed at reducing "micro"-damage to the bearings and the toothed wheels at the stationary points of contact during long stand still periods of the rotating parts, especially during transportation, caused by lubricating film rupture at those contact points. This phenomenon may not be visible to the naked human eye but results in a reduced lifespan of the components. According to the invention, auxiliary rotating means during transportation are provided to avoid lubricating film rupture and the associated damage (see patent specification paragraphs [0001]-[0005], [0011]).

3. Main Request : Inventive Step

3.1 It is important for the patentability discussion first to assess the scope of the claimed method. It appears from a reading of paragraphs [0013] and [0045] of the patent specification that beside transportation of complete nacelles of a wind turbine, the transportation only of components (e.g. a gear or a generator) is within the scope of the claimed invention. Therefore the subject-matter of claim 1, when reading the claims in the light of the description, encompasses methods of moving a generator or a gear of a wind turbine being transported individually from the generator or the gear manufacturing facilities to the wind turbine assembly plant for integration with the rest of the wind turbine components. In the opinion of the Board, these embodiments of the claimed method lack an inventive step.

3.2 It is undisputed that it is generally known to transport individual components e.g. a generator or a gear of a wind turbine. This generally known method can be considered as the closest prior art.

3.3 Vis-a-vis this generally known transport of wind turbine rotating parts the subject-matter of claim 1 of the main request differs in its four steps : securing at least one auxiliary device, connecting it to the rotating means, transferring energy to one or more shafts of the rotating means, rotating the one or more shafts discontinuously. These differing features solve the problem of micro-damage of the surfaces of the rotating parts during transportation, see above.

3.4 It is undisputed that the problem of damage caused by lubricating film rupture at contact points during transport or stand still of rotating machinery is well

known in a variety of fields, as illustrated by D7, D8 and D9 see the introductory part of D7, page 1, lines 1-42; document D8, page 5, paragraph 2 ("Wie bekannt, kommt es bei Stillstand ... insbesondere während des Transports..."); and document D9, page 1, line 14 ("It is well known..."). Accordingly, the skilled person is familiar with the problem of damage to rotating parts when not rotated during transport and will be permanently aware of the need to avoid that problem, in particular when he has to deliver a particular rotary component to the client without risk of transport damages.

In particular D7 in its title recites the general applicability of the described method: "Apparatus for preventing damage to Load-carrying Bearings during Transit and Storage". This is reiterated in the opening lines, page 1, lines 11-17, where D7 states that its invention relates to "preventing damage to bearings fitted to assemblies which may be subjected to vibrations, as for example during transit in a ship or vehicle or which may remain for long periods without use". It is true that D7 specifically mentions engine or a jet engine (see page 1, line 21 "...such as ...used in jet engines"; page 1, line 35 "...for example, in the case of an engine..."), but it is immediately clear from the whole contents of D7 that these applications are cited as examples, for illustrative purpose only. There is nothing from the further disclosure that suggests that its teaching might be limited to those applications. The detailed embodiment does not mention engines or any other particular application. Rather, it describes the embodiment in generalized, schematic terms as is also immediately apparent from the figures. It further addresses the same problem as the patent-in-suit,

namely that "...the lubricant film contained in the bearings may be broken down..." causing "fretting corrosion" or "false brinelling" (see D7, page 1, lines 25-42). The solution taught by D7 in page 1, lines 43-52 displays the same features as the method of claim 1 of the main request, namely coupling an auxiliary device - a solenoid operated motor device - to the rotating means during transportation, transferring energy from said solenoid operated motor device to one shaft of the rotating means imparting intermittent rotational movement to the shaft, except that the method under dispute in the proceedings is specifically used for components of a wind turbine.

D8 and D9 are similarly general teachings. D8 is concerned with "rotating machines, in particular electrically rotating machines", see abstract, while D9, on page 1, lines 9 to 13, states that its invention relates to "rotary machines, and particularly, *but not exclusively* (emphasis added) to dynamo-electric machines ...". This is also apparent from the neutral and generic terminology used to define the invention in their main claim. There is nothing that indicates that their claimed solution to what they identify as a general problem would be specific to any particular application.

3.5 In the opinion of the Board, the skilled person in the present case is not simply an engineer involved in the design and development of wind turbines. Given that the main object of the patent is turbine transport, the skilled person will also have a good knowledge of the transport of heavy goods, more particularly the transport of rotary machines of which wind turbines are an example. For this reason he will be familiar with the teachings of D7, D8 and D9. Consequently, when

confronted with the above problem of damage during transport to rotating parts of a wind turbine he will as a matter of obviousness draw on these general teachings as they address the general problem of damage during transport to rotating parts. Thus, knowing that a generator or a gear of a wind turbine is a specific example of the referred type of assemblies of document D7, D8 or D9, it would be obvious to the skilled person to apply these general teachings to the known method of transportation of a generator or a gear of a wind turbine in order to avoid transport damage, arriving at the claimed subject-matter without exercising inventive skill.

3.6 The Board is not convinced by the argument that components of a wind turbine are generally transported in a pre-assembled state in a nacelle and that the teachings of D7-D9 are therefore not applicable to a nacelle of a wind turbine in an obvious manner, as this argument is, in the view of the Board, in contradiction with the specific statement in the patent specification, paragraph [0045], that "...transportation may also be of components in the nacelle e.g. to the production plant of wind turbines. Examples of components may be the gear and generators being transported to the production plant with transportation means". Nor is this statement in any way borne out by the wording of claim 1 which refers only to the "rotating means of a wind turbine" without mention of a nacelle in any of its features. Thus the claimed invention encompasses transport of wind turbine rotary components with unspecific transportation means and not necessarily pre-mounted in the nacelle. Even so, the Board sees no cogent reason why pre-mounting the rotary parts in the nacelle would in principle hinder or prevent application of, or would in some

other way be incompatible with the solutions offered by any of D7 to D9.

The Board is also not convinced by the argument that documents D7-D9 teach specific attachments of the auxiliary device to the specific machines described therein, making the teachings in the documents not applicable to the components of a wind turbine without further inventive development. As submitted above, the Board finds the teachings of said documents of general nature and applicable to any kind of load-carrying bearing assembly. In particular, document D7 teaches in page 4, line 26 ff. generally that "It is proposed to couple the apparatus to the rotatable part of an assembly at any convenient attachment point, for example...". In this respect, the Board finds that the appellant-proprietor has not submitted any evidence to support the allegation that the transport of a generator or a gear of a wind turbine is so different from the transport of a generator or a gear of any other type that the skilled person would not be in the position to find a convenient attachment point, as indicated by the method of D7.

3.7 The Board thus concludes that the subject-matter of claim 1 of the main request lacks an inventive step in the sense of Article 56 EPC.

4. Auxiliary Requests 1,2,3A,4 - Admissibility

4.1 The appellant opponent originally objects in his reply of 23 October 2013 that auxiliary requests 2, 3 (replaced by auxiliary request 3A at the oral proceedings before the Board) compared to auxiliary request 4 contain divergent subject-matter and should not be admitted.

Auxiliary requests 1,2 were filed with the statement of grounds of the appellant-proprietor, auxiliary requests 3,4 with their reply to the opponent's appeal grounds. The relevant applicable provision is thus Article 12(4) RPBA.

Auxiliary request 1 substantially corresponds to the auxiliary request 2 (with two independent claims) rejected in the decision under appeal, while auxiliary request 2 (which omits one of the two independent claims) is that held allowable in the decision under appeal. Auxiliary request 4 is directed at the other independent claim rejected for lack of inventive step in the decision under appeal. Clearly, such requests that are directed at subject-matter that forms the basis of the decision under appeal cannot be disregarded in appeal if the appeal is based thereon. Auxiliary request 3 (replaced by auxiliary request 3A at the oral proceedings before the Board) was directed at a limitation of claim 1 as held allowable in the decision under appeal made as a reasonable response to the opponent's appeal.

The Board in the present case is thus satisfied that auxiliary requests 1,2,3 and 4 are directed to subject-matter that relates to the case under appeal to the extent required by Article 12(4) RPBA and are accordingly to be taken into account by the Board.

4.2 At the beginning of the oral proceedings, the appellant-proprietor further files auxiliary request 3A. Therefore, this auxiliary request represents an amendment to a party's case in the sense of Article 13 RPBA. Auxiliary request 3A further replaces auxiliary request 3 admitted by the Board into the proceedings as

relating to the case under appeal, Art 12(4) RPBA - see previous paragraph. Vis-a-vis that request which auxiliary request 3A replaces the amendment addresses a minor clarity issue which was of no import to the main issues to be considered in the oral proceedings before the board. The Board consequently admitted auxiliary request 3A into the proceedings, Article 13 RPBA.

5. Auxiliary requests 1,2,3A,4 - added subject-matter

Added subject-matter has been discussed with respect to two different features:

- "during stand still during transportation" in dependent claims 10, 13 of auxiliary request 1, and corresponding dependent claims of auxiliary request 2, auxiliary request 3 (claims 8,11) and auxiliary request 4 (claims 7,10);
- "connected to the high-speed shaft at a gear and a generator", which feature is present at least in one independent claim of auxiliary requests 1,2,3A.

In the opinion of the Board, the claimed subject-matter extends over the contents of the application as filed in both cases, offending the provisions of Article 123(2) EPC.

5.1 "during stand still during transportation"

In the opinion of the Board, this feature is to be read as denoting specific periods wherein the transportation itself (e.g. truck, shift) is halted. However, in the originally filed documents the term "stand still" is used to refer to the general state of the rotating components of the wind turbine being halted, of which transportation is one example but which may also occur in other situations. This may be inferred from page 1,

line 9 and claim 19: "during transportation or stand still"; page 3, lines 19-20: "periods of stand still before erection ..., e.g. during transportation"; page 9, lines 24-26: "at transportation or other types of stand still". Whilst transport in general is thus originally disclosed by way of example of stand still in the sense of the patent, the modified formulation "stand still during transportation" which implies intervals or sub-periods of stand still during overall transportation is not clearly and unambiguously derivable by the skilled person from the originally filed documents.

These passages in particular, in the Board's understanding, do not specify or make any distinction between different phases within the overall transportation period as argued by the appellant-proprietor.

5.2 "connected to the high-speed shaft at a gear and a generator"

According to this feature, that does not have a literal basis in the application as filed, the auxiliary device can be connected simultaneously to only one shaft (the high-speed shaft) at two different locations, namely at a gear and at a generator.

The appellant-proprietor submits that the feature is based on the "and" alternative of the originally filed claim 3:

> *"...said auxiliary device is connected to one or more shafts such as the high-speed shaft at the gear and/or the generator".*

However, in the opinion of the Board, this formulation contains an ambiguity. In a first (in the Board's view more likely) reading the auxiliary device is connected to the high speed shaft at the gear and/or the high speed shaft at the generator, i.e. to either one or both high speed shafts. In an alternative (though grammatically less likely) reading, the auxiliary device is connected to one of more shafts, which may be the high speed shaft, at either or both of two locations, namely at the gear and/or the generator.

In the absence of an unambiguous disclosure in originally filed claim 3, the skilled person must resort to the rest of the disclosure to interpret it. However, claims and description are not consistent in their use of terminology, making the interpretation of claim 3 more difficult. The relevant passages in the description refer to "shaft ends" and their connection, page 21, lines 24-30 of the original disclosure. In that embodiment the high speed shaft can be separated (for transport) into two shaft ends extending from the gear and from the generator respectively and which may temporarily be connected in order to move both ends. Alternatively, the described embodiment may "separately connect auxiliary device(s) to each high-speed shaft end or just move one of the shaft ends e.g. the shaft end of the gear". In the understanding of the Board these passages describe the possibility to either connect one single auxiliary device to two different and separate shaft ends, or to connect an auxiliary device - at one location - to two shaft ends that are temporarily connected. Thus the possibility that the auxiliary device is connected simultaneously to only one shaft (the high-speed shaft) at two different locations is not directly and unambiguously derivable by the skilled person from this passage, if at all.

The appellant-proprietor further refers to page 22, lines 19-21 and fig. 9, disclosing connection means including a cardan coupling system 25, temporarily connecting the high-speed shaft ends. In the immediately following paragraph, page 22, lines 23 onwards, the connection of the cardan coupling system is to "the high-speed shafts" plural, which appears to corroborate the first reading (connection to one or more shafts) rather than the second reading (connection to one shaft at one or more different locations).

Thus, the Board holds that this feature introduces subject-matter that extends beyond the contents of the originally filed application because it is not clearly and unambiguously derivable from the originally filed documents.

6. Auxiliary request 5 and 6: admissibility

The appellant-proprietor filed further auxiliary requests 5 and 6 during the oral proceedings before the Board. The appellant-opponent challenges admissibility of these requests as being filed late and not meeting the "clear allowability" criteria required for such belated requests.

The Board, according to the following considerations, decides to admit only auxiliary request 6.

6.1 Auxiliary request 5 is not admissible because of a prima facie lack of clarity with respect to the definition of "rotating means". Claim 1 recites "rotating said one or more shafts of the rotating means". Thus, according to claim 1 the one or more shafts are a part of the rotating means. In contrast,

independent claim 2 prescribes "rotating the rotating means . . . , wherein the rotating means are the high-speed shaft ends of . . .", i.e. only one part of the shaft (the high-speed shaft ends) can embody the rotating means. In view of this apparent contradiction, the scope of the feature "rotating means" appears not to be clearly defined for the skilled person in a first reading of the claims.

Prima facie, the claims appear unclear. The criterion of clear allowability of amendments (see Case Law of the Boards of Appeal, 8th edition, July 2016, IV.E. 4.4.2.a) is thus not met. Therefore, the Board decided not to admit auxiliary request 5 into the proceedings according to Article 13(1) RPBA.

6.2 The independent claim giving rise to the clarity issue of auxiliary request 5 is not present in auxiliary request 6. It is further immediately apparent to the Board that auxiliary request 6 addresses all the issues discussed so far in the proceedings, especially the added subject-matter objections. Furthermore, contrary to the submission of the appellant-opponent the amendments do not give rise to new issues in the proceedings. In relation to the issues discussed it is thus "clearly allowable". In this regard, the Board adds that what is clearly allowable must be decided relative to those issues that have been debated, and not all possible issues that have been raised but not yet discussed.

Otherwise, claim 1 corresponds to claim 1 of the auxiliary request 2 discussed and held unallowable for lack of inventive step in the decision under appeal and resubmitted in auxiliary request 4 in appeal. Though patentability of this claim had not yet been discussed

in the oral proceedings, it had been addressed by both parties in their written submissions to date. It is therefore not a new issue, and it is moreover one that the appellant-opponent can be expected to deal with in the framework of the oral proceedings.

The appellant-opponent further argues that after looking at auxiliary request 3A filed during the oral proceedings, it is to be expected that the appellant-proprietor would develop the case in that direction and not in a divergent one as is the case for the new auxiliary request 6. This argument is not convincing either. This auxiliary request corresponds to auxiliary request 4 on file, wherein dependent claims have been deleted to overcome the added subject-matter objection. It is consequently not divergent with respect to the subject-matter already on file. At this point the Board further refers to the arguments set out above in paragraph 4. with respect to "diverging" subject-matter pursued during these appeal proceedings.

In view of the above the Board decided to admit auxiliary request 6 into the proceedings according to Article 13(1) RPBA.

7. Auxiliary Request 6 - Inventive step

7.1 With respect to the main request, claim 1 of auxiliary request 6 contains the additional feature that "said method activates one or more oil lubricating pumps supplying lubrication to said rotation means". This feature solely requires supplying lubrication without any further qualification with regard to quantity or pressure. Thus, in the opinion of the Board, any

occurring minimum supply of lubrication would anticipate this feature.

7.2 As already discussed (see paragraph 3. above - inventive step of main request), a method of moving a gear box of a wind turbine (as an instance of the rotating means claimed by auxiliary request 6) is considered by the Board to be obvious for the skilled person in the light of the teachings of D7 to D9.

It is not disputed that wind turbine gear boxes are normally lubricated for example using splashed or forced lubrication systems, as also acknowledged in the patent specification in paragraph [0055], using lubrication pumps, typically positive displacement pumps, that may be of the type which are directly driven by the shaft of the gear box.

The only point disputed between the parties is that in the obvious application of teaching of one of D7 to D9 to the known transport of wind turbines, the resulting rotation of the one or more shafts will be too slow for a customary, directly driven lubrication pump of a standard wind turbine gearbox lubrication system to provide lubrication. Thus, the appellant-proprietor submits that with the actuation speed of the device taught by e.g. D7 the oil lubrication pump would be driven too slowly and would deliver no oil or a very low output pressure. They conclude that consequently, the reasoning of the decision under appeal, that obviously applying the teaching of any of D7 to D9 to the known transport of a wind turbine with a standard lubrication system would inevitably result in the system's lubrication pump supplying lubrication to the rotation means, is incorrect.

7.3 However, this argument overlooks the fact that a positive displacement pump is a type of machine that delivers a fixed volume of fluid per revolution no matter the discharge pressure, and wherein back flow is prevented. A minimum rotating speed is thus not a pre-condition in a pump of this type for providing oil supply. Therefore, and as found by the opposition division, a minimum pump driving speed is not needed to anticipate the claimed feature, that solely requires supplying lubrication without any further qualification with regard to quantity or pressure. Furthermore, the appellant-proprietor has not submitted any evidence to the contrary, to refute this finding of the opposition division in the appealed decision.

7.4 Thus, in the opinion of the Board, when the skilled person applies the method of D7 to the transport of a known gear box of a wind turbine, for which application he needs no inventive skill (see paragraph 3. above), said gear box being provided with a customary type of lubrication pump actuated by movement of the shaft, the skilled person would inevitably arrive at the method as claimed by claim 1 of the auxiliary request 6 without the need of an inventive step, because the rotating movement of the shaft produced by application of the method inevitably leads to supply of lubrication by the positive displacement pump, even if that movement is very slow. Therefore, in the opinion of the Board the subject-matter of claim 1 of auxiliary request 6 does not involve an inventive step in the sense of Article 56 EPC.

7.5 In view of the above, the Board confirms the conclusion of the opposition division that the subject-matter of claim 1 of auxiliary request 6 does not involve an inventive step in the sense of Article 56 EPC.

8. For the above reasons the Board holds that, even taking into consideration the amendments made by the appellant-proprietor, the patent and the invention to which it relates do not meet the requirements of the Convention. The Board thus revokes the patent pursuant to Article 101(3)(b) 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