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**Datasheet for the decision  
of 23 June 2023**

**Case Number:** T 1662/21 - 3.2.04

**Application Number:** 14198672.9

**Publication Number:** 2886858

**IPC:** F03D1/06, F03D80/70

**Language of the proceedings:** EN

**Title of invention:**

Wind turbine with blade pitch system

**Patent Proprietor:**

Nordex Energy Spain, S.A.U.

**Opponent:**

Siemens Gamesa Renewable Energy GmbH & Co. KG

**Headword:**

**Relevant legal provisions:**

EPC Art. 114(2), 123(2), 56

**Keyword:**

Late submitted material - correct exercise of discretion (yes)

Amendments - added subject-matter (no)

Inventive step - (yes)

**Decisions cited:**

T 0688/16, T 0966/17

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

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**Case Number: T 1662/21 - 3.2.04**

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 23 June 2023**

**Respondent:** Nordex Energy Spain, S.A.U.  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
28 July 2021 concerning maintenance of the  
European Patent No. 2886858 in amended form.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** S. Oechsner de Coninck  
K. Kerber-Zubrzycka

## **Summary of Facts and Submissions**

- I. The opponent appeals against the decision of the Opposition Division concerning maintenance of the European Patent No. 2886858 in amended form. An appeal filed by the proprietor was withdrawn.
- II. In its written decision the Opposition Division held that the patent as amended according to an auxiliary request met the requirements of the EPC, having regard inter alia to the following documents:  
  
D1: US 2012/0134806 A1  
D3: US 2013/0216394 A1
- III. In a communication in preparation for proceedings the Board gave a provisional opinion on the relevant issues.
- IV. Oral proceedings were held on 23 June 2023 in the presence of all parties.
- V. The appellant opponent requests that the decision under appeal be set aside and the patent be revoked.
- VI. The respondent (patent proprietor) requests that the appeal be dismissed, auxiliarily that the decision under appeal be set aside and the patent be maintained based on auxiliary request 2 (submitted with the statement setting out the grounds of appeal as auxiliary request 6 ) or on new auxiliary request 3 submitted with letter of 13 March 2023.

VII. The wording of the independent claim 1 of the auxiliary request 1 reads as follows (feature numbers have been added by the Board for better understanding while features added with respect to granted claim 1 have been underlined by the Board):

- M1 "Wind turbine with blade pitch system wherein the wind turbine comprises:
- M1.1 • at least one blade (1),
  - M1.2 • a bearing (2) with a fixed ring (3) attached to a hub (4) of the wind turbine and a moving ring (5),
  - M1.3 • a driving plate (6)
    - M1.3.1 actuated by an actuator (7) attached to the hub (4),
    - M1.3.2 wherein the driving plate (6) is disposed between the blade (1) and the bearing (2) and
    - M1.3.3 comprises a rear face (12) disposed in contact with the blade (1) and
    - M1.3.4 a front face (15) disposed in contact with a rear face (16) of the moving ring (5) of the bearing (2),
    - M1.3.5 wherein the rear face (12) of the driving plate (6) is perpendicular to the longitudinal direction of the blade (1),
    - M1.3.6 and the front face (15) of the driving plate (6) is perpendicular to the bearing axis (2),
    - M1.3.7 the rear face (12) and the front face (15) of the driving plate (6) forming an angle other than 0°, and
  - M1.4 • attaching means (9, 10) for connecting the blade (1), the driving plate (6) and the moving ring (5) of the bearing (2),
  - M1.5 wherein the actuator (7) is attached to the front face (15) of the driving plate (6),

M1.5.0 by means of a shaft (8) or ball joint system connecting the actuator (7) with the driving plate (6) which is at least partially integrated as a protrusion on said driving plate (6), forming a single part,

M1.5.1 and wherein the attaching means (9, 10) comprise bolts (9) arranged in holes (14) passing through the moving ring (5) of the bearing (2), the driving plate (6) and the root of the blade (1),

M1.5.2 wherein the bolts (9) are arranged parallel to the longitudinal direction of the blade (1)."

VIII. The appellant argues as follows:

- The opposition division wrongly admitted auxiliary request 1 and their decision to admit should be overturned.
- The amendments to claim 1 of auxiliary request 1 are based on an intermediate generalisation that is unallowable under Art. 123(2) EPC.
- The subject-matter of claim 1 does not involve an inventive step in view of D1 and D3.

IX. The respondent argues as follows:

- The opposition division admitted auxiliary request 1 using the correct criterion of prima facie relevance.
- Claim 1 according to auxiliary request 1 does not contain added subject-matter.
- The subject-matter of claim 1 according to auxiliary request 1 involves an inventive step in view of D1 and D3.

## **Reasons for the Decision**

1. The appeal is admissible
  
2. Background  
The patent concerns a pitching system for a wind turbine rotor. It is sought to simplify the actuating and bearing assembly while being able to provide a cone angle beneficial for tower clearance at the tip of the blade, paragraph 020. The core idea is to provide a driving plate having a rear face inclined with respect to a front face and to provide attaching means with bolts arranged in holes passing through the moving ring of the bearing, the driving plate and the root of the blade.
  
3. Auxiliary request 1 - review of decision to admit
  - 3.1 This request corresponds to the first auxiliary request on which the impugned decision is based and thus forms the basis of the appeal proceedings pursuant Article 12(1) and (2) RPBA. This request was filed at the oral proceedings before the division and admitted into the proceedings in application of Rules 80 and 116 EPC, decision, reasons 4.3.
  
  - 3.2 The Appellant Opponent argues that the opposition division incorrectly applied its discretionary powers under Art 114(2) EPC and that moreover Rule 116(2) would be "insufficient" in governing new requests filed in opposition proceedings, grounds 2.2.a) and (3)(i) (page 4). In particular its application here would not strike a fair balance between the interests of the parties. Furthermore, relevant criteria had been applied incorrectly.

3.2.1 As evident from the decision the division based its decision to admit the auxiliary request on Rules 80 and 116(2) EPC.

3.2.2 In what regard Rule 116(2) EPC would be "insufficient" where it governs admission of late filed requests is not apparent to the Board from the Appellant's arguments.

According to Rule 116(2) the patent proprietor (in opposition proceedings) may be invited to submit documents that meet the requirements of the Convention (i.e. amendment requests), by the date specified in Rule 116(1), second sentence. After that date the third and fourth paragraphs of Rule 116(1) EPC will apply *mutatis mutandis* : new requests filed after that date need not be considered unless admitted on the grounds that the subject of the proceedings has changed.

3.2.3 It is generally accepted that the purpose of Rule 116 is to prevent parties from seeking unjustified procedural advantages by abusive tactics in disregard of procedural economy and to the disadvantage of other parties, see CLBA, 10th edition 2022, III.C.6.3.1f. The rule is thus seen to serve fairness and transparency in the lead-up to the final deciding stage of the procedure. One can debate whether a notification of the grounds prejudicing maintenance refers in opposition also (as it does in examination) to a summons or communication that notifies the division's provisional opinion; or that in the fourth sentence Rule 116(1), which applies *mutatis mutandis* in opposition, a change of subject of the proceedings encompasses a subsequent reversal of a preliminary opinion that was notified in the summons or communication. T0688/16, reasons 2.1, saw it this way, reading Rule 116(2) as requiring a notification that grounds prejudiced maintenance before



a division could decide *not* to consider a request, finding that this corresponded to the guidance provided in the Guidelines for Examination, E-III, 8.6. Accordingly, the proprietor must always be given an opportunity to submit amendments intended to overcome objections raised by the division that depart from a previously notified opinion. The Board tends to agree, adding that this does not mean that any amendment then submitted must be admitted. The division will first need to establish whether amendments are indeed intended to overcome the objections, and do so in a way that is appropriate and proportionate to the circumstances. They thus still have discretion, see also T0966/17, but should exercise it differently from when deciding admission of amendments filed after the Rule 116 date that are not justified by a change of the subject of the proceedings.

- 3.2.4 The Board does not agree that offering the proprietor an opportunity to amend when confronted with a reversal in a previously positive provision opinion would be inherently unfair to an opponent as argued by the Appellant. Firstly, for the proprietor revocation of the patent, if confirmed on appeal, is the end of the road; for an opponent even after appeal the possibility of national invalidity proceedings remains. Secondly, this depends very much on how the discretion is exercised and what criteria are applied. In the Board's view the criteria set out in the Guidelines cited above appear to strike a fair balance between the opposing interests of the parties and the overall interest of procedural economy. Naturally, the opponent must also be heard before any decision on admission is taken.

3.3 The only question can therefore be, whether the division in admitting the request applied its discretion under Article 114(2) EPC and Rule 116 in the correct manner, in accordance with the relevant guidelines, and followed due process. In this context the Board refers to established case law, see CLBA, 10th edition, 2022, V.A.3.4.1 b) and the decisions cited therein, according to which a board should overrule the way in which a department of first instance exercised its discretion in a particular case only if they conclude that it did so in accordance with the wrong principles, without taking the right principles into account or in an arbitrary or unreasonable way, thereby exceeding the proper limits of its discretion. The Guidelines E-III, 8.6 and E-VI, 2.2 provide the division with specific guidance in this regard.

3.3.1 In the present case, the division in the annex to the summons of 6 October 2020 gave an initial opinion that was *favourable* to the respondent proprietor, see point 4.4 of the annex. At the oral proceedings the division then reversed that opinion when it held that the claim 1 of the main request had been unallowably amended, page 2 (announcement after first interruption). Therefore, under the second half of the last sentence of Rule 116(1) ("unless ..."), and as indicated above the division was obliged to offer an opportunity to amend, though still afforded some discretion to admit what might be then submitted. After a new first auxiliary request was filed and then not admitted, page 5, bottom, the current auxiliary request 1 was filed, the parties heard and admissibility discussed (middle of page 6) and then decided (page 6, bottom).

- 3.3.2 The appellant refers to item 4.2 on page 8 of the decision, and submits that the opposition division applied the criteria of convergence in an erroneous manner. Furthermore, the prima facie assessment of added subject-matter was obviously wrong as the combination of granted claims (claims 1 and 9) has obviously no relevance for that question.
- 3.3.3 The Board disagrees. Firstly, in the Board's view the division needn't have considered whether the new auxiliary request converged with the one it replaced. The only reason they did so was because the opponent raised the issue. Convergence can be a useful admission criterion to ensure procedural efficiency when a division (or a board) is faced with a scattergun approach, where a proprietor or applicant files multiple requests that pursue disparate lines of defence following different inventive ideas usually in response to attacks against novelty or inventive step, see the decisions cited in CLBA, 10th edition 2022, V.A.5.12.5. However, convergence is by no means a necessary criterion that fits all situations.

This is a situation where the Board believes it does not. In the present case the new request was only the proprietor's second attempt to address the finding of an unallowable intermediate generalization for the main request, the first attempt having failed and then being withdrawn (the Board holds that requests that were withdrawn before consideration are not relevant). As can be inferred from the minutes, see the section bridging pages 4 and 5, it must have become clear to the proprietor in the discussion of the previous (withdrawn) auxiliary request, how to fix the problem, namely by combining granted claims 1 and 9 as suggested by the opponent. They then did so in the next (present)

auxiliary request that replaced the previous request which was not admitted. In the Board's view it would have been unreasonable and unequitable to then block them from such an attempt, which the division - in the light of the previous discussion - would have considered likely to succeed, at least at first glance, merely because they should not be allowed to row back from a previous attempt. That the division then did consider a criterion it needn't have makes no difference for the appellant, as the outcome would have been the same (admission) if they had not considered it. Had the outcome been different (non-admission), the proprietor might have had reason to argue improper exercise of discretion as based on the wrong criteria.

- 3.3.4 For the Board the only decisive point for determining whether the division exercised its discretion properly is their prima facie analysis. Was that analysis reasonable? Though section 4.2 of the decision is poorly worded, and does not seem to reflect completely the considerations of the division, the Board is able to infer from the context and by consulting the minutes what those considerations were. The earlier discussion of added subject-matter (section 2) concluded that the feature M1.5 (the only feature challenged for added subject-matter) was taken out of context from the description without the further features identified in section 2.5 resulting in an unallowable intermediate generalization. Those missing features, as can be easily ascertained, are also the subject of granted claim 9 (which was not challenged in opposition). Apart from the specification of the side of the driving plate (feature M1.5) claim 1 then simply combined granted claims 1 and 9 corresponding to originally filed claims 1,2,4,5,6 and 14, see minutes, page 6, 4th statement by the proprietor. It can be inferred that this is why the

division held that simple combination of granted claims 1 and 9 prima facie overcame the previous objection without introducing a further unallowable generalization. For the Board these considerations seem reasonable and based on the right principles.

3.4 Therefore the Board concludes that the opposition division did not exercise its discretion according to the wrong principles, or without taking into account the right principles, or in an unreasonable way, and thus did not exceed the proper limits of its discretion afforded by Art. 114(2) EPC. The questions, what might be the consequence of overturning a decision to admit a request on which the appealed decision is based, or whether there is even a legal basis for doing so, can therefore be left unanswered.

4. Auxiliary request 1 - Added subject-matter

4.1 During examination granted claim 1 was amended by adding the features of claims 2,4 and 6 as originally filed and further adding that the actuator is attached to the front face of the driving plate. Present claim 1 now further incorporates feature M1.5.0 which corresponds to the features of claim 14 as originally filed corresponding to granted claim 9. Thus claim 1 now specifies that the actuator connects to the driving plate by means of a shaft or ball joint system, representing two alternative connection modes of actuator and plate.

4.2 The appellant's contentions concern the first alternative, the connection of the actuator and drive via a shaft. In particular the application as originally filed would require that the actuator is a linear hydraulic actuator, with one end attached to the

hub and the other end to the driving plate, see the appellant's statement of grounds, top of page 11. At the oral proceedings before the Board the appellant further argued that without those features, feature M1.5.0 could be read as including the possibility of the shaft connecting directly to the center of the driving plate with a toothed gear, for example.

- 4.2.1 The Board is unconvinced by these arguments. Features M1.3 and M1.3.1 already require attachment of the actuator to the hub, implying attachment to the hub at one, first end of the actuator. Further feature M1.5 specifies that the actuator is attached to the front face of the driving plate. Read in conjunction with features M1.3 and M1.3.1 this can only mean attachment of the actuator to the driving plate at another, second end of the actuator. Thus these features argued to be missing are already implicit in the wording of claim 1 of this request.
  
- 4.2.2 In the present context, an actuator that must transmit driving force from the hub to the driving plate between blade and bearing with ring fixed to the hub (features M1.2, M1.3, M1.3.1, M1.3.2) and having two ends can - in the Board's understanding - only reasonably be an actuator of the linear type. The interpretation proposed by the appellant where the actuator would comprise a rotary motor driving a gear meshing with an central gear connected to the driving plate would not be consistent with the wording of the claim, in particular because the actuator itself would not have two attachment ends but a single one and a meshing gear at another end. This would be at odds with the requirement of a fixed attachment or connection of actuator and plate.

- 4.3 As concerns the type of linear actuator the Board concurs with the respondent, that the original description does not require the actuator to be a hydraulic actuator. Paragraph 025 indicates that the actuator is *preferably* a hydraulic one, which indicates that this is just one of a various possible realizations of the actuator. Nor is it apparent from figures 4 and 5, which show no detail of the linear actuator, or the relevant parts of the description detailing actuation that this would somehow be linked to the type of linear actuator, in particular that it is hydraulic.
- 4.4 Finally the further specification that the protrusion be located excentrically to the driving plate appears to be implicit, once it is inferred that the actuator is of a linear type. The transmission of a rotary motion to adjust the pitch of a wind turbine blade through linear movement of an actuator arm requires that the protrusion is set excentrically on the plate to be rotated.
- 4.5 Thus the Board finds that all the further features that the appellant considers inextricably linked to attachment of the actuator on the front face of the driving plate are already implicit in the claim wording. The Board thus confirms the decision's finding that the amendments to claim 1 of the auxiliary request 1 complies with the requirements of Art 123(2) EPC.
5. Inventive step starting from D1
- 5.1 Both the opposition division and the appellant opponent used D1 as starting point. D1 discloses a wind turbine rotor 4 comprising a hub 7 and three blades 5 with pitch bearings 9 arranged there between (paragraph 069,

Figure 2). The blades 5 can be rotated around their longitudinal axis using hydraulic cylinders 10 connected to the hub 7 and the respective blades 5, see figure 4. In figure 5 a connection part 14 is located between a centre ring 25 of the bearing 9 and the blade 5. Through bolts (not referenced) provide fastening of this assembly with the bolts shown in figure 5 arranged parallel to the longitudinal direction of the blade 5. In paragraph 110 it is indicated that connection part 14 can be formed in different ways including as a round plate comprising a centre hole.

- 5.2 It is common ground that the subject-matter of claim 1 at least differs from this blade pitch system by the rear face and the front face of the connection part as driving plate forming an angle other than 0°.
- 5.3 Providing an angle allows to increase the distance between the blade tip and the tower, paragraph 015, so as to avoid tower strikes. The associated objective technical problem can be formulated as how to avoid tower strikes.
- 5.4 This problem is a well known in the field of wind turbines. One of the known solutions is to provide a cone angle at the root to increase clearance at the tip. Indeed this is known as pre-coning and the relevant angle is the pre-coning angle, see patent specification, paragraph 0006.
- 5.5 The appellant in particular relies on D3 to suggest pre-coning the root, and to provide a solution that the skilled person would implement to adapt the shape of the driving plate disclosed by D1 to arrive at the claimed configuration.



5.6 D3 discloses in one of its embodiments depicted in figure 7 an adaptor 76 having a mounting surface 78 at a non-parallel angle relative to the mounting face of the outer radial ring 86 of the bearing, paragraph 042. The Board indeed considers that for the skilled person, who wants to pre-cone the blades of the turbine of D1, it would be relatively straightforward to replace the ring/plate structure 14,23 of D1 by the adaptor 76. However, as the adaptor 76 connects separately (at the top via a first set of bolts) to the blade and the race 45 (in the outer radial ring 86 by way of another set of bolts), the resultant structure would not include the last features M1.5.1 and M1.5.2 of claim 1 that the attaching means comprise bolts that pass through holes in the blade, the driving plate and the bearing and that are parallel to the blade longitudinal direction. In that arrangement a single set of bolts connects all three components in a direction offset from the moving ring axis. In the Board's view such an inclination of a through hole through a load carrying ring of the bearing is mechanically unusual, if not counter-intuitive, and requires an insight that goes beyond the routine skills of the skilled person.

5.7 The appellant considers that the general teaching of D3 goes beyond the embodiment of figure 7. In paragraph 008, the adaptor could also be configured as a solid plate member, as in paragraph 0110 of D1, or as a ring member having a circumferential mounting surface or configuration with spokes, as in of figure 4 of D1. Paragraph 0011 of D3 further explains that the blade root mounting surface may be in a non-parallel plane relative to the plane of the bearing race to provide an angular offset. The skilled person could be expected to change the angle between the outer surfaces of a plate. In so doing changing the angle of the bolt would also

be regarded as an obvious measure for the small pre-coning angles, 1° to 5°, considered in paragraph 026 of the patent.

5.8 The Board finds otherwise. Both paragraphs 0008 and 0011 of D3 appear in an introductory section that summarizes separate aspects or embodiments of the main idea of an adaptor between blade and hub, which are then described in greater detail in the following section. Paragraph 008 of D3, which follows on paragraph 0007 introducing the general idea, can then be seen to correspond to the embodiments shown in figures 3, 4 and 5, where the adaptors are indeed realized as suggested in paragraph 0008. Those embodiments do not feature pre-coning. Paragraph 011, which starts off by: "With still another embodiment", is then seen to refer to the embodiment of figure 7, where the adaptor is realized with a pre-coning angle. Thus paragraph 0008 and 0011 concern separate embodiments. There is no suggestion in D3 that these might be combined. Even if the skilled person did consider combining them and provide two non parallel surfaces on plate 80 of figures 4 and 5 of D3 there would not be any obvious reason for the skilled person to depart from the mounting shown also in those figures. Nor does the Board have any reason to believe that the provision of a single set of long bolts connecting three components at an inclined angle would be common general knowledge.

5.9 The Board concludes, therefore, that, in the light of the prior art cited, the subject-matter of claim 1 as upheld according to auxiliary request 1 involves an inventive step within the meaning of Article 56 EPC.

6. It thus confirms the opposition division's decision that, considering the amendments made to the patent according to the auxiliary request 1, the patent and the invention to which it relates meet the requirements of the EPC, and that therefore the patent can be maintained as amended, Art 101 (3) (a) EPC.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated