

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 16 March 2022**

Case Number: T 0483/19 - 3.2.01

Application Number: 14166768.3

Publication Number: 2826708

IPC: B64C21/00, B64C27/467,
F03D1/06, F04D29/16, F03D1/00

Language of the proceedings: EN

Title of invention:

Wind turbine rotor blade assembly with surface features

Patent Proprietor:

General Electric Company

Opponents:

Nordex Energy SE & Co. KG
3M Innovative Properties Company

Headword:

Relevant legal provisions:

EPC Art. 54, 56, 83, 123(2)
RPBA 2020 Art. 13(2)

Keyword:

Inventive step (yes)

Sufficiency of disclosure (yes)

Admissibility of late filed submissions (no)

Novelty (yes)

Added subject-matter (no)

Decisions cited:

Catchword:



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
Fax +49 (0)89 2399-4465

Case Number: T 0483/19 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 16 March 2022

Appellant: General Electric Company
(Patent Proprietor) 1 River Road
Schenectady, NY 12345 (US)

Representative: de Rooij, Mathieu Julien
Bardehle Pagenberg S.L.
Avenida Diagonal 420, 1^o 1^a
08037 Barcelona (ES)

Respondent: Nordex Energy SE & Co. KG
(Opponent 1) Langenhorner Chaussee 600
22419 Hamburg (DE)

Representative: Hauck Patentanwaltspartnerschaft mbB
Postfach 11 31 53
20431 Hamburg (DE)

Respondent: 3M Innovative Properties Company
(Opponent 2) 3M Center
P.O. Box 33427
St. Paul MN 55133-3427 (US)

Representative: Müller, Bruno
3M Deutschland GmbH
3M Office of Intellectual Property Counsel
Carl-Schurz-Straße 1
41453 Neuss (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 21 December
2018 revoking European patent No. 2826708
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman H. Geuss
Members: C. Narcisi
 O. Loizou

Summary of Facts and Submissions

- I. The European patent No. 2 826 708 was revoked by the decision of the Opposition Division posted on 21 December 2018. Against this decision an appeal was lodged by the Patentee in due form and in due time pursuant to Article 108 EPC.
- II. The following documents are cited in this decision:
- EP-A (designating the published patent application of the contested patent);
EP-B (designating the publication of the contested patent);
D3 (US 2012/0269644 A1);
D4 (EP 2 484 895 A1).
- III. Oral proceedings were held on 16 March 2022. The Appellant (Patent Proprietor) requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of auxiliary 3 filed with the statement of the grounds of appeal. The Appellant withdrew all other requests on file. The Respondents I and II (Opponents 2 and 1 respectively) requested that the appeal be dismissed.
- IV. Claim 1 of auxiliary request 3 (sole request) reads as follows:
- "A rotor blade assembly (100) for a wind turbine (10), the rotor blade assembly comprising:
A rotor blade (16) having exterior surfaces defining a pressure side (22), a suction side (24), a leading edge (26), and a trailing edge (28) each extending between a

tip (32) and a root (34), the rotor blade (16) further defining a span (44) and a chord (42); and a surface feature (102) configured to be installed on an exterior surface defining a pressure side (22) or a suction side (24) of the rotor blade (16), the surface feature being flexible and having an exterior mounting surface (122), at least a portion of the exterior mounting surface (122) having a contour in an uninstalled state different from a contour of the exterior surface of the rotor blade (16) at a mount location of the surface feature on the rotor blade (16), a plurality of attachment features (130) connecting the surface feature to the rotor blade (16), the plurality of attachment features (130) comprising a first attachment feature proximate a perimeter of the surface feature and a second attachment feature spaced from the perimeter of the surface feature relative to the first attachment feature, and a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130), the seal member (160) contacting and providing a transition between the exterior surface (102) and the surface feature (102)".

V. The Appellant's (Patentee) arguments may be summarized as follows:

The objection of the Respondents alleging that claim 1 includes subject-matter (i.e. as implied by the feature "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)", hereinafter designated as feature (i)) extending beyond the content of the application as filed should not be admitted into

the appeal proceedings. This objection is late filed since it was raised only during the oral proceedings before the Board of Appeal and also not in response to any new arguments or submissions of the Patentee.

The subject-matter of claim 1 does not extend beyond the content of the application as filed, for the feature reading "the surface feature being flexible" (hereinafter designated as feature (ii)) is derivable from EP-A (see e.g. paragraph [0024]), "flexible" implying both a material being apt for bending as well as an elastic material.

The patent specification discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. In effect, there is no contradiction between dependent claims 8 and 9 (depending inter alia on claim 8), given that specific mounting locations on the wing (see e.g. D4, figure 3) may include both a convex and a concave shape, e.g. in wing regions including points where a transition from a convexly shaped segment to a concavely shaped segment (as seen in a chordwise (vertical) wing section) occurs. Further, different mounting locations on the rotor blade may have a "concave" or a "convex" shape.

Secondly, the skilled person based on common technical knowledge would naturally interpret the terms "concave" and "convex" (see e.g. claims 8 and 9) as defining the shape of a surface resulting from observing it in frontal and direct view, thus frontally and directly exposing the surface to the observer's view. Consequently, the skilled person would understand that (based on this definition) the exterior mounting surface 122 (of the surface feature 102) as shown for

example in figures 3 and 7 is concave whereas the exterior surface of the rotor blade is convex, in accordance with the wording of claim 9.

The skilled person would therefore conclude that the definition of the terms "convex" and "concave" as resulting from paragraph [0027] of EP-B (in conjunction with the figures) is obviously erroneous and incorrect (as both the exterior mounting surface 122 and the exterior surface are defined as being "convex" in figure 3 and 7). Nonetheless, this apparent contradiction would not prevent the skilled person from correctly understanding the invention and from putting it into effect, as detailed above.

The subject-matter of claim 1 is new over D3 since at least features (iii) (i.e. "the plurality of attachment features (130) comprising a first attachment feature proximate a perimeter of the surface feature and a second attachment feature spaced from the perimeter of the surface feature relative to the first attachment feature") and (i) (i.e. "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)") are not disclosed in D3.

The Respondents' objection based on lack of inventive step of the claimed subject-matter over D4 should not be admitted into the appeal proceedings as it was raised only during oral proceedings before the Board and it was not submitted in response to any new arguments or filings of the Patentee.

The subject-matter of claim 1 involves an inventive step over D3, for feature (i) in conjunction with the further claimed features would not be obvious for the skilled person. In particular, in D3 (see paragraph

[0016], [0031], figure 2 and 7) two sealing members are already provided for protecting the attachment features (or mounting bands) against humidity and adverse weather conditions on the outer perimeter of the surface feature. Therefore, the skilled person would not be incentivized or motivated to arrange further sealing members also on the inner side portion of the surface feature to protect the mounting bands, as there would be no necessity to do this.

VI. The Respondents' (Opponents 1 and 2) arguments may be summarized as follows:

The subject-matter of claim 1 extends beyond the content of the application as originally filed (EP-A), for feature (i) (i.e. "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)") was not disclosed in EP-A, and this objection should be admitted into the appeal proceedings. Indeed, the Appellant's construction of this feature was submitted only during oral proceedings before the Board of Appeal, the Appellant alleging feature (i) implying a single seal member surrounding (at least a portion) of the perimeter of the surface feature and at the same time the entirety of the plurality of the attachment features of said surface feature. Consideration for the Respondents' right to be heard therefore justifies the admission of said objection, which is in response to this surprising interpretation of feature (i) by the Appellant.

The subject-matter of claim 1 extends beyond the content of the application as filed, for feature (ii) (i.e. "the surface feature being flexible") is not

derivable from EP-A (see e.g. paragraph [0024]), "flexible" merely implying a material being apt for bending but certainly not an elastic material, as the Appellant contends.

The patent specification does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

The dependence of claim 9 on claim 8 (depending on claim 1) requires that the exterior surface (of the rotor blade) be at the same time concave and convex. This is clearly impossible for the skilled person to implement, given that claim 1 specifies only one mounting location, contrary to the Appellant's view. Also, there is no disclosure in the patent specification (EP-B) that at a specific mounting location the exterior surface (of the rotor blade) may be both convex and concave, as contended by the Appellant. This evidently entails that the invention as defined by the set of claims is not sufficiently disclosed.

In addition, the scope of protection of claim 1 is completely unclear, for paragraph [0027] in EP-B gives an unambiguous and consistent definition of the terms "convex" and "concave" based on the figures, such that e.g. in figure 3 and 7 both the exterior mounting surface 122 and the exterior surface (of the rotor blade) are defined as "convex", contrary to the Appellant's definition. The unambiguous and consistent definition according to paragraph [0027] implies that the configuration of the exterior mounting surface and of the exterior surface as implied by claim 9 (the exterior mounting surface and the exterior surface being respectively "concave" and "convex") is not

illustrated in any of the figures disclosed in EP-B, particularly not in figures 3 and 7 (as contended by the Appellant).

Moreover, for the specific configuration (mentioned in paragraph [0027]) according to claim 9 no further indications or details are given in the description of EP-B concerning any technical effects possibly resulting or obtained by this configuration. Consequently, the skilled person would not be able to infer from EP-B which specific configuration (or embodiment) is protected by claim 1, given none of the specific configurations (or embodiments) according to the figures (in particular figures 3, 5 and 7) being explicitly incorporated and included in the set of claims, whereas claim 9 is not supported by the description and the figures. In particular, the skilled person would not be capable of deducing from EP-B, whether protection is sought e.g. for the embodiment shown in figure 3 or according to claim 9.

In conclusion, it ensues that the invention (particularly dependent claim 9) is not sufficiently clearly and completely disclosed for it to be carried out by the skilled person.

The subject-matter of claim 1 is not new over D3, feature (i) (i.e. "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)") and the further features of claim 1 being known from D3. In particular, feature (i) is derivable from D3, for D3 discloses in figure 2 and 7 a sealing member 3 which surrounds at least a portion of the perimeter of the surface feature 1 and surrounding at least a

portion (and not the entirety) of the plurality of attachment features 11A, 12A (see D3, [0016], [0033]).

The objection based on lack of inventive step of the subject-matter of claim 1 in view of D4 should be admitted into the appeal proceedings in view of the Appellant's surprising interpretation of feature (i). In addition, admitting D4 into the appeal proceedings would not be incompatible with procedural economy, as D4 was already discussed in relation to the issue of novelty of the subject-matter of claim 1 of the main request.

The subject-matter of claim 1 is not inventive over D3, given that the skilled person would obviously provide a sealing member in the form of a sealing strip 3 also on the inner longitudinal edge of the adhesive layers 2 and mounting bands 11A (see figure 2 and 7), thus sealing also the portion of the adhesive strips 2 which is located (on the exterior surface of the rotor blade) within the interior of the surface feature 1. Thus a better protection of the adhesive layers 2 against humidity and adverse weather conditions would be achieved.

Alternatively, the same result would be obtained by the skilled person by simply closing and sealing both open ends of the surface feature 1 (see D3, figure 7) using appropriate sealing material. Hence, feature (i) in combination with the further claimed features (known from D3) cannot justify an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. The objection raised by Respondent I (Opponent 2) against feature (i) (i.e. "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)") on the grounds of article 123 (2) EPC was not admitted into the appeal proceedings pursuant to article 13(2) RPBA 2020 (Rules of procedure of the Boards of Appeal).

In effect, this objection was raised at a very late stage in appeal proceedings, during oral proceedings before the Board. Contrary to the Respondents' contentions this objection was not filed in response to an allegedly new interpretation of feature (i) by the Appellant. Feature (i) plainly and clearly states that the seal member is intended for "surrounding .. the plurality of attachment features" and there is no indication on file that feature (i) was not understood as such before or that it had been interpreted as "surrounding at least a portion of the plurality of attachment features" as alleged by the Respondents. Therefore no exceptional circumstances (according to article 13(2) RPBA 2020) arise in the present case, which were justified with cogent reasons for admitting said objection into the appeal proceedings.

3. The subject-matter of claim 1 of auxiliary request 3 (sole request) does not violate Article 123(2) EPC, since the inclusion of feature (ii) (i.e. "the surface feature being flexible") does not extend the subject-matter of claim 1 beyond the content of the application as filed (EP-A).

Indeed, EP-A discloses that "the surface feature 102 may be flexed or otherwise manipulated from the uninstalled state to the installed state" (EP-A,

paragraph [0025]), this being equivalent to the indication of the surface feature "being flexible" in claim 1. In effect, a "flexible" material implies merely the material's aptitude for being bent, not necessarily any material elasticity as contended by the Respondents.

4. The European patent discloses the invention in a manner sufficiently clear and complete for it to be carried by a person skilled in the art, such that the ground for opposition based on Article 100 (b) EPC is unfounded.

The first objection raised by the Respondents does not convince the Board, as the dependence of claim 9 on claim 8 does not necessarily and inevitably imply subject-matter such that the skilled person would not be able to put it into effect.

Indeed, the skilled person reading independent claim 1 in conjunction with claims 8 and 9 would understand that evidently different mounting locations must be implied (see in claim 1 the wording "at a mount location"), these different mounting locations consequently comprising an exterior surface (of the rotor blade) which may be "concave" (see dependent claim 8) or "convex" (see dependent claim 9), corresponding to the specific mounting position on the rotor blade. Therefore no contradictions arise, allegedly relating to the exterior surface at a mount location being at the same time "convex" and "concave".

Concerning the second objection raised by the Respondents, the Board takes the view that the reasons and arguments submitted by the Respondents do not convincingly and adequately support the contention that the scope of protection and the subject-matter defined

by the claims is unclear for the skilled person, in a way such that it would not be possible to carry out the invention.

In effect, the subject-matter of independent claim 1 of the pending request does not include the contested features as implied by the terms "convex" and "concave", allegedly leading to the mentioned major ambiguity and lack of clarity. Therefore, the scope of protection and the subject-matter as defined by claim 1 are not affected by the Respondents' objection and the skilled person would be able to put the invention into effect, for instance on the basis of the embodiments shown in figure 3, 5 and 7 and as detailed in the corresponding portions of the description of EP-B. This was not disputed by the Respondents.

Further, concerning the embodiment according to dependent claim 9, the Board concurs with the Respondents' view that in agreement with the unequivocal and consistent definition of the terms "convex" and "concave", as given in paragraph [0027] of EP-B, this embodiment is not illustrated in the figures of EP-B and is only mentioned in passing in paragraph [0027]. Indeed, in paragraph [0027] the exterior mounting surface (of the surface feature) and the exterior surface (of the rotor blade) are consistently defined as being "convex" or "concave" according to an observer's view taken from above. Accordingly, both said surfaces as specifically shown in figures 3 and 7 are defined as "convex", contrary to claim 9 defining said exterior mounting surface as "concave". Therefore, contrary to the Appellant's view the embodiment according to dependent claim 9 is (only mentioned in paragraph [0027] and) not supported by figures 3 and 7 and is not further detailed in the description.

Nevertheless, the Board considers that the skilled person would be able to carry out the embodiment implied by claim 9, as this would merely imply changing the geometrical configuration of the exterior mounting surface depicted in figures 3, 7 from "convex" to "concave", thus obtaining the figure shown on page 6 of Respondent's II (Opponent 1) reply to the statement of grounds of appeal. The Respondents never disputed that the skilled person would be able to put this embodiment into effect. Entirely similar and analogous arguments obviously hold for the embodiment according to dependent claim 8.

In conclusion, the arguments submitted by the Respondents according to said first and second objection are unfounded since they cannot validly support the contention that the skilled person would not be able to carry out the invention.

5. The subject-matter of claim 1 of auxiliary request 3 (sole request) is new over D3 (Article 54 EPC), at least feature (i) (i.e. "a seal member (160) surrounding at least a portion of the perimeter of the surface feature (102) and the plurality of attachment features (130)") being not derivable therefrom. Contrary to the Respondents' view feature (i) clearly implies that the seal member (160) surrounds "the plurality of attachment feature". This is not derivable from D3, for figure 2 (in conjunction with figure 7) only illustrates that a seal member 3 is provided on both longitudinal external sides of the surface feature 1, to protect the adhesive layer 2, fixing mounting bands 11A, 12A to the rotor blade's exterior mounting surface. Hence, the seal member(s) 3 does not surround the attachment feature or adhesive 2, given the open

ends of the surface feature 1 and no seal member 3 being provided on the interior longitudinal sides of the surface feature 1.

6. The Respondents' objection concerning lack of inventive step of the subject-matter of claim 1 based on D4 was not admitted into the appeal proceedings pursuant to Article 13 (2) RPBA 2020 (Rules of Procedure of the Boards of Appeal). This objection was raised only during oral proceedings before the Board, thus being late filed. It was also not filed in response to any unexpected or surprising submission of the Appellant, as feature (i) of claim 1 is clear and understandable (see above, point 2) and no new construction of this feature was put forward by the Appellant during the oral proceedings. Consequently, no exceptional circumstances do arise in the present case, which would justify the admission of this objection into the appeal proceedings.

7. The subject-matter of claim 1 of auxiliary request 3 involves an inventive step over D3, given that at least feature (i) would not be obvious for the skilled person in view of D3 (Article 56 EPC) and common general knowledge.

In the Board's view the skilled person starting from D3 would not be incentivized or motivated to implement the technical measures according to feature (i). In particular, D3 discloses in paragraph [0016] that "heat and cold could compromise the lifetime of the adhesive" and "therefore, to protect the adhesive layer, an additional grout seal could be applied along the outer edges of the mounting bands". For this reason, according to the embodiment of figure 2 "to protect the adhesive 2 from weather influence, a strip of grout 3

can be applied as a protective seal for the adhesive 2" (see D3, paragraph [0031]).

Hence the skilled person would derive from D3 that the outer edges of the mounting bands need protection from weather influence and the solution is illustrated in the embodiment of figure 2. Additionally protecting the inner edges of the mounting bands (as proposed by the Respondents) is not disclosed or suggested in D3 or in the cited prior art and no evidence shows that this constitutes or is directly derivable from common general knowledge, and that the skilled person would necessarily implement such a measure. Therefore, the subject-matter of claim 1 is not rendered obvious for the skilled person in view of D3 and common general knowledge.

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 on the basis of the claims of auxiliary request 3 filed with the statement of the grounds of appeal and a description to be adapted.

The Registrar:

The Chairman:



A. Vottner

H. Geuss

Decision electronically authenticated