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Datasheet for the decision of 29 January 2026

Case Number: T 0144/24 - 3.2.04

Application Number: 15731839.5

Publication Number: 3161307

IPC: F03D1/06, B29C65/78, B29C65/48

Language of the proceedings: EN

Title of invention:
IMPROVEMENTS RELATING TO WIND TURBINE BLADE MANUFACTURE

Patent Proprietor:
Vestas Wind Systems A/S

Opponent:
LM Wind Power A/S

Headword:

Relevant legal provisions:
EPC Art. 123(2), 54(2), 56
RPBA 2020 Art. 13(2)

Keyword:

Amendments - allowable (no)
Novelty - (yes)
Inventive step - (yes)
Amendment after notification of Art. 15(1) RPBA communication - exceptional circumstances (yes) - exceptional circumstances (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 0144/24 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 29 January 2026

Appellant: (Patent Proprietor)	Vestas Wind Systems A/S Hedeager 42 8200 Aarhus N (DK)
Representative:	Kent, Peter Joseph Quayside IP Limited Unit 3 The Quayside Maltings High Street Mistley, Manningtree, Essex CO11 1AL (GB)
Appellant: (Opponent)	LM Wind Power A/S Jupitervej 6 6000 Kolding (DK)
Representative:	COPA Copenhagen Patents Rosenvængets Allé 25 2100 Copenhagen Ø (DK)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 6 December 2023 concerning maintenance of the European Patent No. 3161307 in amended form.**

Composition of the Board:

Chairman	A. Pieracci
Members:	G. Martin Gonzalez
	K. Kerber-Zubrzycka

Summary of Facts and Submissions

I. The opponent appeals the interlocutory decision of the opposition division to maintain the patent in amended form.

During oral proceedings before the Board the proprietor withdrew their previously filed appeal.

II. The opposition division held inter alia that claims 1 and 2 as maintained complied with Art 123(2) EPC (added subject-matter), and that the subject-matter of claims 1-3, and 15 were new and involved an inventive step.

III. The appellant opponent requests that the decision under appeal be set aside and the patent revoked in its entirety.

The respondent proprietor requests that the decision under appeal be set aside and that the patent be maintained on the basis of the new main request or new first auxiliary request submitted with letter of 27 November 2025.

IV. Oral proceedings by videoconference before the Board where held on 29 January 2026.

V. Independent claim 1 of the requests relevant to this appeal reads as follows:

(a) New main request

"A method of making a wind turbine blade, the method comprising:

a. providing a first half shell (32a) and a second half shell (32b) to be joined together to form the wind turbine blade, the half shells (32a, 32b) each extending in a longitudinal direction;
b. attaching a first edge (46) of a shear web (42a, 42b) to an inner surface (36a) of the first half shell (32a);
c. defining a shear web mounting region (62a, 62b) on an inner surface (36b) of the second half shell (32b);
d. attaching a plurality of guide blocks (60a, 60b) to the inner surface (36b) of the second half shell (32b) adjacent to the shear web mounting region (62a, 62b), the guide blocks (60a, 60b) being spaced at intervals in the longitudinal direction, each guide block (60a, 60b) having a guide surface (70) oriented transversely to the inner surface (36b) of the second half shell (32b), and the guide blocks (60a, 60b) being arranged such that a minor portion (84) of the guide surface (70) is located adjacent to the shear web mounting region (62a, 62b) and oriented substantially perpendicular to the inner surface (36b) of the second half shell (32b), and a major portion (82) of the guide surface (70) is inclined relative to the minor portion (84);
e. bringing the first and second half shells (32a, 32b) together whilst guiding a second edge (50) of the shear web (42a, 42b) over the guide surfaces (70) of the mounting blocks (60a, 60b) towards the shear web mounting region (62a, 62b) defined on the inner surface (36b) of the second half shell (32b); and
f. attaching the second edge (50) of the shear web (42a, 42b) to the shear web mounting region (62a, 62b) of the second half shell (32b)."

(b) New first auxiliary request

"A method of making a wind turbine blade, the method comprising:

a. providing a first half shell (32a) and a second half shell (32b) to be joined together to form the wind turbine blade, the half shells (32a, 32b) each extending in a longitudinal direction;

b. attaching a first edge (46) of a shear web (42a, 42b) to an inner surface (36a) of the first half shell (32a);

c. defining a shear web mounting region (62a, 62b) on an inner surface (36b) of the second half shell (32b);

d. attaching a plurality of guide blocks (60a, 60b) to the inner surface (36b) of the second half shell (32b) adjacent to the shear web mounting region (62a, 62b), the guide blocks (60a, 60b) being spaced at intervals in the longitudinal direction, and each guide block (60a, 60b) having a guide surface (70) oriented transversely to the inner surface (36b) of the second half shell (32b);

e. bringing the first and second half shells (32a, 32b) together whilst guiding a second edge (50) of the shear web (42a, 42b) over the guide surfaces (70) of the mounting blocks (60a, 60b) towards the shear web mounting region (62a, 62b) defined on the inner surface (36b) of the second half shell (32b), the guide surface (70) being oriented so as to guide the shear web (42a, 42b) in a direction outwards from a central longitudinal axis of the blade towards a leading or trailing edge (38, 40) of the blade as the first and second half shells (32a, 32b) are brought together to form the blade; and

f. attaching the second edge (50) of the shear web (42a, 42b) to the shear web mounting region (62a, 62b) of the second half shell (32b)."

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

(D2) US 2011/0008175 A1
(D5) WO 2014/094780 A1
(D14) CN 101979239 A
(D14t) English translation of CN 101979239 A

VII. The parties' arguments relevant to the decision are discussed in detail in the Reasons for the Decision

Reasons for the Decision

1. The invention focuses on improving the manufacturing process of wind turbine blades by ensuring the correct positioning of the internal shear webs during assembly (see specification para 0001). The method involves providing two half shells that form the blade, with shear webs attached to the inner surfaces (see para 0002). Guide blocks are attached to the second half shell to assist in positioning the shear webs accurately when bringing the two half shells together. The guide blocks are bonded to the inner surface of the second half shell. Accordingly, the process includes bringing the two half shells together while guiding the shear webs into the correct position using the guide blocks (see guide blocks 60a, 60b in Figs. 2-4). The invention aims to prevent shear webs from moving during the mould closure, ensuring optimal bonding positions (see paras 0012, 0023 and 0028).

2. Admission of the new main request and new first auxiliary request of 27 November 2025.

2.1 New main and first auxiliary requests were filed on 27 November 2025, after the Board's communication under Article 15(1) RPBA of 24 September 2025. Their admission therefore has to be decided upon by the Board under Article 13(2) RPBA. According to Art 13(2) RPBA, such an amendment to a party's case shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

2.2 The new requests are, both, based on the old auxiliary request 1, filed on 28 March 2024 with the grounds of appeal, which had 4 independent claims 1-3, 15. The amendments in both requests concerned only deletion of independent claims, and the consequential renumbering of the remaining claims or deletion of appended dependent claims as necessary.

2.3 It is now widely accepted that even such an uncomplicated amendment, i.e. the mere deletion of claims, always constitutes an amendment to the appeal case as per Art 13 RPBA (see the Case Law of the Boards of Appeal (CLB), 11th Edition, 2025, V.A.4.2.3.d). The proprietor's argument based on earlier case law applying this provision of the RPBA - that it should not to be considered an amendment to the appeal case - does not therefore convince the Board.

2.4 However, in case of deletion of claims, the boards have in several decisions come to the conclusion that exceptional circumstances were present and admitted the requests, even if these could have been filed earlier in the proceedings. The reasons given for this were

among other things that the reduced claim-set did not change the scope of the appeal but simplified the proceedings, that it enhanced procedural economy without disadvantaging the opponent, that the principles of procedural economy and procedural fairness were safeguarded, that the factual and legal scope of the proprietor's case was not altered and the opponent was not faced with any new subject-matter and that there was no need to reassess the subject-matter of the proceedings (see CLB, V.A.4.5.4.j, and T 2295/19 therein cited and referred to by the proprietor in their letter of 27 November 2025).

2.5 All these criteria are met by the new main and first auxiliary requests. The deletion of one (for the new main request) or several (for the new first auxiliary request) independent claims, enhances procedural economy by reducing the issues under discussion. All remaining independent claims have been discussed by the parties at length in their written submissions and addressed by the Board in its written preliminary opinion. Therefore, the factual and legal scope of the case is not altered, the appellant opponent is not faced with any new subject-matter, any remaining subject-matter is known and has been addressed by the appellant opponent, there is therefore no need to reassess anything of the subject-matter of the proceedings, there is nothing new - whatever minimal - to be discussed. These represent for the Board exceptional circumstances in the sense of Art 13(2) RPBA that justify admittance of the new requests.

2.6 It is not convincing, contrary to what is submitted by the appellant opponent, that these reasons can only allow a single new request. The Board does not see the reasons why. Moreover, in the present case, the filing

of the new requests reduced the number of requests from 14 (a main request and 13 auxiliary requests) to only 2, thus clearly promoting procedural economy (one important criteria cited above) and also clearly safeguarding procedural fairness by the nature of the amendments.

2.7 The Board therefore decided to admit the new requests into the proceedings, Art 13(2) RPBA.

3. New main request - Added subject-matter

3.1 Claim 1 of the new main request corresponds to claim 1 of former auxiliary request 1, which in turn corresponds to the text maintained by the opposition division. The claim has been amended, inter alia, to include the limitation that the guide surface comprises a minor portion and a major portion.

3.2 The Board concurs with the opponent that claim 1 contains added subject-matter because the introduction of a "major" and a "minor" portion of the guide surface, extracted in isolation from the embodiment shown in Fig. 4 and described on pages 10 and 11 of the application as originally filed, constitutes an unallowable intermediate generalisation, contrary to the conclusions reached by the opposition division in sections 5.2 and 6.2 of the appealed decision.

3.3 According to established case law, an amended claim may not normally be based on the extraction of isolated features from a set of features originally disclosed only in combination, for example from a specific embodiment in the description or drawings of the original application. Such an intermediate generalisation is permissible only if there is no

clearly recognisable functional or structural relationship among the features of the specific combination, or if the extracted feature is not inextricably linked with those features (see CLB, II.E. 1.9.1).

3.4 In the present case, the distinction between a "major" and a "minor" guide surface in the application as originally filed is not a purely qualitative or descriptive labelling. Rather, it is inseparably linked to specific proportions of the guide surface portions which serve a defined technical function. Fig. 4 as originally filed shows one "major" guide surface 82 and one "minor" guide surface 84; the major portion provides a considerably longer guiding or sliding path (L1), whereas the minor portion provides a short guiding path (L2) occurring before mould closure. Throughout the original disclosure, the expressions "major" and "minor" are used only in this context and solely to characterise the two surface portions that realise this guiding concept. The application contains no disclosure in which those terms denote portions of a guide surface independent of that functional relationship. These proportions give technical meaning to the terms "major" and "minor" by defining the sequence of movement, and are therefore inextricably linked to the terms in the original disclosure.

This understanding is confirmed by the description, in particular page 10, lines 5–15, which explains that the major guide surface extends from the thin end of the block to an edge "spaced slightly apart from the mounting surface", while page 10, line 34 to page 11, line 10 describes that the shear web is guided by the minor guide surface only "immediately prior to the mould closing". The disclosure therefore presents the

major and minor portions as elements of a coordinated guiding concept in which a long inclined movement is followed by a short final movement shortly before closure.

3.5 By contrast, the contested claim employs the terms "major" and "minor" in isolation, without including any limitation as to the geometry, proportions or functional relationship of the corresponding surface portions. Consequently, as discussed at the oral proceedings, the claim encompasses embodiments in which the two portions may differ in a dimension unrelated to the disclosed guiding sequence, for example where the "major" guide surface portion is merely wider perpendicular to the sliding direction, or is made wider and shorter while still preserving a larger surface area, which might even result in a longer sliding path on the "minor" surface, contrary to the originally described guiding sequence, or in a configuration in which the surface does not extend closer to the mounting surface. Such embodiments would not reproduce the sequence of movements originally disclosed and are therefore not directly and unambiguously derivable from the application as filed.

3.6 The respondent proprietor further relies on the passage bridging original pages 11 and 12, which states that many modifications may be made to the specific examples, including guide blocks having a different shape or a curved major guide surface. This passage cannot provide a basis for the claimed generalisation. While it indicates that other shapes of guide blocks are possible, it does not disclose that the specific functional relationship between the major and minor guide surface portions - namely a longer inclined path (L1) followed by a short final vertical movement (L2)

immediately prior to mould closure - may be dispensed with. The passage is silent on any modification of this relationship and therefore cannot justify the extraction of the features "major" and "minor" in isolation.

3.7 Alternatively, the proprietor argues that the skilled person would implicitly understand "major" and "minor" as referring solely to the extent of the surfaces in the guiding direction. This is not convincing. A difference in width perpendicular to the guiding direction may equally serve technical purposes, such as providing greater contact area for force transmission or influencing frictional behaviour. Nor does the ordinary meaning of "block" impose any requirement that the relative dimensions of the surface portions be oriented in the guiding direction.

3.8 The proprietor's further reference to original page 5, lines 29–32 and to original claims 14 and 15 is likewise unpersuasive. Those passages do not mention the "major" and "minor" character of the two surface portions and therefore provide no disclosure for the extraction of these features in their generalised form.

3.9 The Board therefore concludes that claim 1 of the new main request contains subject-matter extending beyond the content of the application as originally filed, contrary to Article 123(2) EPC.

4. New first auxiliary request - Novelty

4.1 Claim 1 of the new main request corresponds to claim 3 of former auxiliary request 1, which corresponds to the request as maintained by the opposition division.

4.2 The appellant opponent's arguments that its subject-matter lacks novelty over the disclosure of documents D2 and D14 have not convinced the Board.

4.3 Document D2 describes a rotor blade for wind turbines comprising a pair of girders 14, 16 joined to first and second half shells 10, 12 and at least one shear web permanently joined to the girders by means of connecting profiles 26, 28, 30, 32 (see paragraph [0008]), which may have various cross-sections (see Figs. 2A–2D). In the Board's view, it cannot reasonably be considered that the "connecting profiles" 26, 28, 30 or 32 of D2, which are described as longitudinally extending structures of considerable length ("several meter long", paragraph [0026]), constitute "blocks" within the ordinary meaning of that term (cf. Merriam-Webster: "a compact usually solid piece"), which implies a three-dimensional body having relatively balanced proportions.

The fact that these profiles may be segmented (see paragraphs [0019] and [0026] of D2), as argued by the opponent during the oral proceedings, does not alter this conclusion. Even if provided in segments within blades several metres long, the elements are still disclosed in D2 only as elongated profiles rather than as discrete blocks.

4.4 Regarding D14, claim 1 includes inter alia the amendment that "...the guide surface (70) being oriented so as to guide the shear web (42a, 42b) in a direction outwards from a central longitudinal axis of the blade towards a leading or trailing edge (38, 40) of the blade as the first and second half shells (32a, 32b) are brought together to form the blade". This feature is not disclosed in D14.

4.5 As is apparent from Figures 1 and 2 of D14, the positioning blocks 8 (shown in more detail in Figure 3) can only guide shear webs 3, 4 in a direction inwards from a central longitudinal axis. D14 therefore does not disclose, either explicitly or implicitly, guidance of the shear webs in an outward direction as required by claim 1.

4.6 The appellant opponent submits that the "central longitudinal axis" referred to in claim 1 is not further defined in the contested claim and may therefore be interpreted as corresponding to the geometric centre of a given cross-sectional profile. On that basis, the axis in Figure 1 of D14 would lie to the left of both shear webs 3 and 4, such that the above feature would also be disclosed by D14.

The Board cannot follow this interpretation. As argued by the proprietor, claim 1 refers to the central longitudinal axis of the blade, not of an individual cross-section. The patent consistently depicts this axis midway between the shear webs along the blade length (see Figures 2c and 3), which reflects the conventional understanding in the field.

The skilled person would therefore understand the central longitudinal axis in D14 to be located between

the shear webs in the cross-sections shown so that the shear webs cannot be directed outwards as claimed. Accordingly, the subject-matter of claim 1 is novel over D14, and the Board sees no reason to depart from the finding in point 6.5 of the impugned decision in respect of claim 3 as maintained (corresponding to present claim 1).

4.7 In the course of the oral proceedings before the Board, the appellant opponent raised a new novelty objection based on a different embodiment of D14, namely that disclosed in claim 1 of D14 (see D14t). Unlike the embodiment shown in the figures, this embodiment does not include the prior step of connecting the two individual webs 3 and 4 (the trailing-edge and leading-edge webs) into a single unit before assembly.

This objection was submitted for the first time at the oral proceedings and thus after the notification of the Board's preliminary opinion under Article 15(1) RPBA. Its admission is subject to the Board's decision pursuant to Article 13(2) RPBA. The Board could not identify any exceptional circumstances, within the meaning of Article 13(2) RPBA, that would justify raising this objection at such a late stage, particularly as the objection concerns subject-matter maintained by the opposition division (corresponding to claim 3 as maintained) and could have been presented with the grounds of appeal, nor did the appellant opponent put forward any. The Board therefore decided not to admit this objection pursuant to Article 13(2) RPBA.

5. New first auxiliary request - Inventive step

5.1 The appellant opponent submits that, contrary to the findings of the opposition division in section 6.7.1.3 of the appealed decision (claim 3 as maintained, corresponding to present claim 1), the subject-matter of claim 1 lacks an inventive step starting either from D14 or from D2. The appellant's arguments are not convincing.

5.2 Starting from D14, the control blocks 8 guide the shear webs inwardly, whereas claim 1 requires outward guiding. Even when adopting the less ambitious technical problem formulated by the opponent, namely the provision of an alternative guiding direction for the web over the blocks (grounds of appeal, p. 29, last paragraph), the skilled person would not, as a matter of obviousness, arrive at the claimed outward guiding in the context of the design of D14. In the positions in which the blocks are located in D14, there is no apparent possibility for the blocks to guide a web outwardly, and achieving such guiding would require significant modifications to the central, stable box-like structure formed by the interconnected shear webs. The appellant argues that the skilled person would, depending on the circumstances and following routine design practice, select outward guiding as an obvious alternative to inward guiding, since only two guiding directions are possible. However, regarding this last argument, inventive step must be assessed starting from the concrete configuration shown in Figures 1-3 of D14, and the Board cannot see that placing the control blocks 8 on the opposite side of the individual webs 3 or 4 could arise from a routine design modification of the original design with the central box-like structure

occupying that space, nor has the appellant presented any routine pathway leading to such a possibility.

The same conclusion applies to the combination of D14 with the teachings of the funnel-shaped profiles shown in Figures 2A–2D of D2, with guiding surfaces at both sides of the web. The collet function of those profiles is incompatible with the one-sided flange construction of D14, in which the flange extends horizontally from the web edge (see one-sided flange positioned on the clearance control block 1 and bonding glue 9 in Figure 2 of D14). Such a flanged web could not be introduced into the funnel-shaped collets of D2, which are intended for bare web edges. The proposed combination would therefore require a fundamental alteration of the structural concept of D14, for which neither D14 nor D2 provides any teaching.

5.3 Starting from D2, as already set out for novelty, D2 discloses "connecting profiles" 26, 28, 30 and 32 which are longitudinally extending structures of considerable length and not blocks as required by claim 1. The opponent's argument that replacing such profiles by blocks would be an obvious alternative, either on the basis of common general knowledge or in view of D5 (bridging paragraph pages 4–5, blocks being advantageous for weight reduction), is not persuasive. As explained by the respondent proprietor, the profiles of D2 serve as connecting profiles whose function is to establish, along the entire web length, a reliable and large-area adhesive bond between the shear web edges 22 and the girders 16 (Fig. 1). This continuous bonding joint is structurally essential for the rotor blade, in particular to guarantee its bending stiffness (paragraph 0004), and also enables a better joint and a simpler, more dimensionally stable assembly (paragraph

0007). It forms the core of the teaching of D2, which is to replace the use of T- or C-shaped shear webs by simple flat webs, a solution that is only possible through the use of the described profiles bonding the whole web edge (see D2, paragraphs 0004–0007). D2 therefore teaches away from substituting these profiles by compact blocks, and the skilled person would not, as a matter of obviousness, make such a replacement, since blocks could not provide the required longitudinally continuous adhesive bonding of the shear webs.

5.4 Consequently, the Board is not convinced by the appellant opponent's arguments against inventive step and confirms the opposition division's conclusion in section 6.7.1.3 of the appealed decision (claim 3 as maintained, corresponding to present claim 1) that claim 1 involves an inventive step.

6. For the above reasons, the Board holds that the claims of the new first auxiliary request meet the requirements of the EPC, and that a patent amended in accordance with this request can be maintained pursuant to Article 101(3)(a) EPC, the description still requiring adaptation to the amended claims.

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 with the following claims and a description to be adapted thereto:**

Claims:
No. 1 to 10 according to the New First Auxiliary Request filed with letter of 27 November 2025

The Registrar: The Chairman:

G. Magouliotis A. Pieracci

Decision electronically authenticated