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**Datasheet for the decision
of 9 April 2024**

Case Number: T 1208/21 - 3.2.06

Application Number: 15156480.4

Publication Number: 2921648

IPC: F01D5/14, F01D5/18, F01D9/02,
F01D5/16

Language of the proceedings: EN

Title of invention:
Gas turbine blade comprising bended leading and trailing edges

Patent Proprietor:
Ansaldo Energia Switzerland AG

Opponent:
Siemens Energy Global GmbH & Co. KG

Headword:

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 12(3), 12(5)

Keyword:

Inventive step - (no)

Discretion not to admit submission - requirements of Art.
12(3) RPBA 2020 met (no)

Decisions cited:

T 0447/22, T 1628/21, T 1473/19, T 1127/03, T 0860/93,
T 0454/89, T 0012/81

Catchword:



Beschwerdekammern

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Case Number: T 1208/21 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 9 April 2024

Respondent: Ansaldo Energia Switzerland AG
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Representative: Siemens Energy Global GmbH & Co. KG
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
25 May 2021 concerning maintenance of the
European Patent No. 2921648 in amended form.**

Composition of the Board:

Chairman P. Cipriano
Members: T. Rosenblatt
J. Hoppe

Summary of Facts and Submissions

- I. The appeal lies from the interlocutory decision of the opposition division finding that European patent No. 2 921 648 in amended form met the requirements of the EPC.

In its decision, the opposition division found *inter alia* that the subject-matter of claim 1 of the (amended) main request and of auxiliary requests 1 and 2 lacked novelty, whereas the set of claims in accordance with auxiliary request 3 met the requirements of the EPC.

- II. The appellant (opponent) filed an appeal against this decision. The respondent (patent proprietor) also originally filed an appeal, but this was withdrawn by its letter dated 18 March 2024.
- III. Together with its initially filed statement of grounds of appeal, the respondent (appellant at the time) requested "*that the opposition decision be set aside and the patent be maintained on the basis of the attached claims of the main request or any of the claims of the auxiliary requests*". The respondent (then appellant) also submitted three sets of amended claims in accordance with a main request and auxiliary requests 1 and 2, corresponding to those underlying the impugned decision.

In its statement of grounds of appeal, the appellant requested that the decision of the opposition division be set aside and that the patent be revoked in its entirety. The appellant also raised and maintained, in addition to the objections against the claims found

allowable by the opposition division (auxiliary request 3), objections against the higher-ranking requests underlying the impugned decision, as well as against auxiliary requests 4 and 5 filed before the opposition division.

In its subsequent reply to the appellant's grounds of appeal, the respondent (appellant at the time) refuted the appellant's arguments, including those addressing auxiliary requests 4 and 5 filed before the opposition division. The respondent did however not submit any set of claims in accordance with such auxiliary requests, nor did they formulate any explicit request in this regard.

- IV. The parties were summoned to oral proceedings.
- V. In a subsequent communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA) the Board informed the parties of its preliminary opinion on the case. It opined *inter alia* that the subject-matter of claim 1 in accordance with auxiliary request 3, which was considered by the opposition division to meet the requirements of the EPC, lacked inventive step. In regard to the respondent's auxiliary requests, the Board noted in item 4 of its communication
- "[...] that the [then] appellant-proprietor requested with its statement of grounds of appeal as an auxiliary measure to maintain the patent on the basis 'of the auxiliary requests', without specifying exactly which auxiliary requests are meant. In the annex to their statement of grounds of appeal, claims according to a main request and only auxiliary requests 1 and 2 were submitted and reasoned. In its reply to the statement of grounds*

of appeal of the appellant-opponent, the [then] appellant-proprietor submitted comments on objections of the appellant-opponent against the patentability of auxiliary requests 3, 4 and 5. While auxiliary request 3 forms part of the appeal proceedings as it corresponds to the request found to be allowable by the opposition division (Article 12(1)(a) RPBA), this seems not to be the case for auxiliary requests 4 and 5. The decision is not based on auxiliary requests 4 and 5 and the [then] appellant-proprietor has not formulated an explicit request with respect to these auxiliary requests nor have they been specified or filed in the appeal proceedings. The mere provision of comments as regards patentability with respect to some unidentified auxiliary requests might not fulfill the requirements under Article 12(3) RPBA. Moreover, unless the [then] appellant proprietor demonstrates that the auxiliary requests were admissibly raised, they are to be regarded as an amendment under Article 12(4) RPBA. The question of admittance under Article 12(4) to (6) RPBA might thus arise."

The Board also opined that if auxiliary requests 4 and 5 were to be specified as auxiliary requests 4 and 5 as filed on 17 February 2020, i.e. before the opposition division, amended claim 1 of auxiliary request 4 would seemingly lack novelty, while amended claim 1 of the corresponding auxiliary request 5 appeared to lack an inventive step.

The Board also stated: "*[i]n regard to the letter of the [then] appellant-proprietor dated 9 February 2024 and the request for confirmation of an ID conference number, the Board reminds the parties*

that according to the summons dated 25 April 2023 the oral proceedings are scheduled to take place at the premises in Haar and no request to proceed differently is on file. The Board also does not consider this case suitable to be held as a video conference."

- VI. In response to the Board's communication, the respondent withdrew its appeal and announced that it would not be attending the oral proceedings.
- VII. The oral proceedings were held on 9 April 2024 in the absence of the respondent.
- VIII. The appellant (opponent) requested that the decision be set aside and the patent be revoked. It was further requested to not admit auxiliary requests 3, 4 and 5 into the proceedings.

The respondent (patent proprietor) did not submit any explicit request in regard to the appellant's appeal but presented counter-arguments aimed at dismissing the appeal.

- IX. Claim 1 of auxiliary request 3 underlying the impugned decision has the following wording (feature numbering in square brackets added in accordance with item 12 of the impugned decision; bold and strike-through formatting added by the Board to highlight amendments compared with claim 1 of the main request underlying the impugned decision):

"[1.1.a] A gas turbine
[1.1.b] blade comprising
[1.1.c] an airfoil (1)

[1.2] extending in radial direction from a blade root (2) to a blade tip (3),
[1.3] defining a span (s) ranging from 0% at the blade root (2) to 100% at the blade tip (3), and
[1.4] extending in axial direction from a leading edge (9) to a trailing edge (10),
[1.5] which limit a chord with an axial chord length (6) defined by an axial length of a straight line connecting the leading edge (9) and trailing edge (10) of the airfoil (1)
[1.6] depending on the span (s),
~~characterised in that wherein~~
[1.7] the axial chord length (6) increases at least from 80% span to 100% span,
characterised in that the blade provides an aspect ratio span/axial chord length at $5\% \pm 5\%$ span ranging from 1,6 to 2,1 [sic]."

X. The following evidence is relevant to the present decision:

D3 : US 2012/0183411 A1

XI. The arguments of the appellant, as far as relevant to the present decision, may be summarised as follows.

Auxiliary request 3

Claim 1 of auxiliary request 3 lacked an inventive step if, for instance, D3 was considered to represent the closest prior art to its subject-matter. As also correctly held in item 15 of the impugned decision, D3 disclosed all the features 1.1 to 1.7 of claim 1 of the main request underlying the impugned decision. The only distinguishing feature of the present claim 1 was the feature stated in the characterising portion. The

technical problem considered by the opposition division was too ambitious, since there was no proof in the patent, either experimental or computational, that this effect was really achieved. Furthermore, there were a number of other blade parameters which influenced the natural frequencies of the blade, e.g. the blade being hollow or massive, wall thickness of the hollow blade, etc. In addition, paragraph [0020] of the patent as granted related to the differentiating feature and had no effect at all. The alleged effect of improved vibrational behaviour therefore seemed to be speculative. The objective technical problem could be formulated with respect to further geometrically specifying the blade disclosed in D3. The aspect ratio, which as such was well known to the person skilled in the art, in the range of 1.6 to 2.1, was an arbitrary selection and could therefore not justify an inventive step.

Auxiliary requests 4 and 5 as filed before the opposition division

The appellant further raised objections under Articles 54 and 56 EPC as regards the auxiliary requests filed in the opposition proceedings as auxiliary requests 4 and 5.

- XII. The arguments of the respondent, as far as relevant to the present decision, may be summarised as follows.

Auxiliary request 3

D3 did not disclose features 1.1.a, 1.1.b, 1.7 and the feature in the characterising portion of claim 1 of auxiliary request 3.

The finding of the opposition division in regard to the disclosure of features 1.1.a and 1.1.b was based on an incorrect interpretation of the expressions "gas turbine" and "blade" used in claim 1 according to the broadest interpretation without any reference to the description. The principles to be applied for interpreting the terms in a claim which are derivable from the case law of the Boards of Appeal (see in particular decisions T 454/89, reasons 4.1 (viii), second section; T 860/93, reasons 5.7, last section; T 1127/02, reasons 14) could be summarised as follows

*"- claims must be clear in themselves;
- [the] description cannot be used to cure a lack of clarity under Art 84 EPC of a claim;
- a claim shall always be read in its context, which is defined with reference to the description."*

Since the wording of the claim was clear, as also held by the opposition division, the broadest possible interpretation was not applicable, but the term "gas turbine" had to be read in the context of the patent, with reference to the description, to give it a technically sensible interpretation. Paragraph 2 referred to gas turbine engines and distinguished between "gas turbine engine" on the one hand and "turbine" on the other hand; paragraphs 5 and 21 to 24 referred to "gas turbine" as meaning (at least implicitly) the component of the engine where hot gas is expanded, and paragraph 21 defined the blades as turbine blades. The skilled person would thus have concluded that the expression "gas turbine" in claim 1 referred only to the turbine section where hot gas is expanded.

Similarly, despite there being cases where it was used

to refer to both rotating blades and stationary blades, the term "blade" was widely used to identify only rotating blades, while the stationary blades were often identified by a different term, such as "vane" (see also D5, paragraphs 48 and 49; D8, paragraphs 9 and 12; D9, paragraph 2; D10, paragraph "background art"; D11, paragraph 3 on page 1; D12, paragraph 6; D14, paragraph 3; D16, paragraph 3; D17, paragraph 3; D18, col. 1, lines 41-42). The term "blade" being clear, so the broadest technical meaning should not be used, it should be construed as referring to rotating blades alone, as arising from the description (see for example paragraph 4, page 3, line 6 and lines 57-58, paragraph 22).

Figure 4 of D3 disclosed a stationary blade of a steam turbine engine (see paragraphs 45 and 51). Contrary to the finding of the opposition division, the generic statement in paragraph 59 could not be considered to teach the specific rotating blade for a turbine section of a gas turbine engine having exactly the features of the blade of Figure 4, due to i) a lack of specific indications in this sense, ii) conceptual differences between gas turbine and steam turbine engines and between rotating and stationary blades (e.g. in view of centrifugal forces occurring only in rotating blades), iii) the many possible combinations encompassed by that generic statement. The term "disclosure" used in paragraph 59 of D3 would be understood to relate only to the general teaching of D3 set out in paragraphs 8, 9 and claim 1.

Moreover, paragraphs 2, 34, 43 and 59 of D3 did not disclose at least the combination of features 1.1.a, 1.1.b and 1.7. The opposition division's conclusion that the parabolic geometry mentioned in paragraph 43

of D3 was also applicable to gas turbine rotating blades was incorrect. Paragraph 34 as well as paragraphs 2, 43 and 59 of D3 related to too many preferred embodiments ("can" have parabolic variation, "can" have minimum axial width at mid height, etc.) resulting in too many possible embodiments, so the very specific combination of features 1.1.a, 1.1.b and 1.7 could not be considered to be disclosed (similarly to the situation in T 12/81, reasons 14.2).

The technical effect of the distinguishing features, i.e. features 1.7 and the range of the aspect ratio defined in the characterising portion of claim 1, was to influence the natural vibration frequencies of the blade without worsening the aerodynamic behaviour. This problem or the proposed solution was not suggested in D3. It was not evident how the skilled person would (not simply could) have arrived at the claimed solution starting from D3 and only on the basis of common general knowledge. The appellant had failed to prove that the distinguishing features formed part of common general knowledge.

Auxiliary requests 4 and 5 as filed before the opposition division

The respondent provided comments with respect to the appellant's objections as regards the auxiliary requests filed in the opposition proceedings as auxiliary requests 4 and 5.

Reasons for the Decision

1. The respondent's main request and its auxiliary requests 1 and 2 were filed with its grounds of appeal and are broader than auxiliary request 3 corresponding to the auxiliary request found allowable by the opposition division. While the main request and auxiliary requests 1 and 2 have not been explicitly withdrawn, the Board understands the respondent's withdrawal of its appeal as an implicit withdrawal of these requests. Without an appeal by the respondent, any request broader than that found allowable by the opposition division would otherwise be inadmissible as constituting a violation of the principle of *reformatio in peius*.

Auxiliary request 3 - interpretation of claim 1

2. A claim which is clear by itself should be interpreted as broadly as technically reasonable in the relevant technical field. This represents the commonly accepted approach on claim interpretation by the Boards of Appeal when assessing *inter alia* the patentability requirements of Articles 54 and 56 EPC, as was also confirmed in recent decisions, for example T 1628/21, reasons 1.1.2 and 1.1.7, or T 447/22 reasons 13.1 (see also the case law cited in these decisions). The opposition division too correctly relied on this approach in the impugned decision.
3. It is undisputed that claim 1 of auxiliary request 3, in particular the expression "gas turbine blade", is clear for a skilled person in the field of axial turbo-

machinery. Knowledge in this field encompasses knowledge on *inter alia* gas turbine engines, their general structure, components and operating conditions. The skilled person will be aware that a gas turbine engine is generally composed of (seen in axial direction of incoming air flow) a compressor section for compressing the incoming air, a burner or combustor for combusting fuel in the presence of the compressed air and a downstream turbine section in which the exhaust gases resulting from the combustion drive the turbine (for example to generate electrical power). The skilled person will also be aware that the compressor and turbine sections are each composed of one or more stages of alternating rows of respective stationary blades (frequently also called vanes or nozzles) and rotating blades.

4. It is undisputed that the expression "gas turbine" can be understood by the skilled person to refer either to the entire gas turbine engine or to only the turbine section of such engine. Both interpretations are technically reasonable, and no argument or evidence has been submitted to the contrary. Similarly, the term "blade" used in this context will be understood by the skilled person to designate either a rotating or a stationary blade, without any of these understandings being technically unreasonable or illogical.

It has not been argued, and the Board cannot see, that any of the further features defined in claim 1 would narrow the meaning of the expression "gas turbine blade" with regard to the interpretation above. To the contrary, and as also pointed out by the appellant, dependent claim 11 makes reference to an "actively-cooled rotating turbine blade", thus implying that the subject-matter of claim 1 would not be understood as

necessarily being limited to rotating blades of a turbine section of a gas turbine engine.

5. The Board therefore agrees with the interpretation of this expression adopted by the opposition division as designating a rotating or stationary blade of a gas turbine engine in general, which could be either a rotating or stationary blade of either a turbine section or of the compressor section of such engine. Although the opposition division considered there to be another "indistinctive" interpretation of the expression, the second meaning, i.e. "a blade of the turbine section of a gas turbine engine", is in fact covered by the above interpretation.

6. The opposition division was therefore correct to reject the respondent's approach of a limited interpretation of the claim in the light of the description, on which the respondent in essence also relied in the present appeal proceedings. The respondent's arguments submitted with its statement of grounds of appeal are found unconvincing for the following reasons.
 - 6.1 The Board considers that the principles summarised by the respondent on the basis of certain passages taken from decisions T 454/89, T 860/93 and T 1127/03 (see above item XII.) do not lead to the conclusion that a claim which has a clear meaning for the skilled person shall be given a limited interpretation in the light of the description. In particular, the Board cannot find any consideration in the passages from these decisions referred to by the respondent, nor from the broader context from which the citations have been taken, which would support the respondent's conclusion that, if the wording of a claim is clear within the meaning of Article 84 EPC, the broadest technically reasonable

interpretation (see item 2. above) would be excluded.

As to the extent to which the description and the figures of the patent have to be taken into account for interpreting the wording of a claim, reference is made to the principles set out in decisions T 1628/21, reasons 1.1.11 to 1.1.16, and T 1473/19, reasons 3.16, 3.16.1, with which the present Board agrees.

6.2 Moreover, the description of the patent in suit does not lead to a different conclusion either. The description of the patent as granted states in the final sentence of paragraph 1: "*Generally, the gas turbine blade according to the present invention is not restricted to a gas turbine: rotor blades or guide vanes of a turbo-machinery fall legally under the present invention*". Correspondingly, granted claim 13 is directed to a blade suitable for use as a rotor blade or guide vane for turbo-machinery.

This confirms that the patent itself considers the term "blade" in claim 1 to cover rotating and stationary blades (vanes) as well as their use in turbo-machinery in general, thus not limited to the turbine section of a gas turbine. Although the description and the claims have been amended in auxiliary request 3 by deleting these statements of the granted patent, such an amendment of the description does not constitute a limitation of the claimed subject-matter.

In analogy to, for example, the situation underlying decision T 454/89 referred to by the respondent, in which it was held that a lack of clarity in a claim could not be cured by relying "*on Article 69 EPC as a replacement for the Article 84 requirements, i.e. as a substitute for an amendment which would be necessary to*

remedy a lack of clarity", (*ibid.*, reasons 4.1.(viii)), also in the context of the requirements of Article 54 and 56 EPC, a technically reasonable and not illogical understanding of the claim wording cannot be restricted by reference or an amendment to the description. In such a situation, it would, rather, be the claim wording that would require amendment (see for example T 1628/21, reasons 1.1.18).

- 6.3 The references of the respondent to a number of prior-art documents in which the term "vane" is used exclusively to designate the stationary component, in contrast to the term "blade" used in these documents to refer to the rotating component, does not lead to a different conclusion. These documents, which represent a small selection of prior art, cannot be considered to constitute proof that the skilled person would have understood the term "blade" to exclusively designate a rotating component. In fact, the respondent acknowledged that the term "blade" is also used to designate a stationary component, as evidenced by the patent and *inter alia* D3.

Auxiliary request 3 - Article 56 EPC

7. With this interpretation in mind, and contrary to the finding of the opposition division, the Board comes to the conclusion that claim 1 of auxiliary request 3 underlying the impugned decision does not involve an inventive step starting from the gas turbine blade disclosed in D3 as the closest prior art and in combination with common general knowledge. Under these circumstances, the appellant's objection to the admittance of auxiliary request 3 into the proceedings does not require further consideration.

8. The Board can agree with the opposition division, as stated in item 15 and 15.2 of the impugned decision, that features 1.1.a, 1.1.b, 1.1.c and 1.2 to 1.7, where features 1.1.a and 1.1.b are understood by the skilled person as set out in item 5. above, are disclosed in D3 by the embodiment of Figure 4 together with the content of paragraphs 2, 43 and 59.

8.1 It is noted that the disclosure of features 1.1.c and 1.2 to 1.6 by the (fixed) blade described in relation to Figure 4 of D3 has not been contested by the respondent. The respondent, however, did contest the disclosure of the combination of features 1.1.a, 1.1.b and 1.7.

8.2 In regard to feature 1.1.b, reference is made to paragraph 51, relating to the embodiment of Figure 4, which accordingly shows an airfoil blade which "can be incorporated into a fixed blade assembly", thus disclosing a blade and confirming the meaning of the term "blade" as also designating stationary components, as covered by claim 1.

8.3 It is common ground between the parties that the embodiment of a (stationary) blade in Figure 4 relates to a steam turbine (see also paragraph 45). It was contentious, however, whether the further indications in D3 directed to using the blade in a gas turbine as well constituted a direct and unambiguous disclosure for feature 1.1.a, i.e. a "gas turbine" blade.

The opposition division correctly also considered feature 1.1.a of claim 1 to be anticipated by the embodiment disclosed in Figure 4, taking into account the content of the three paragraphs 2, 43 and 59, instead of only paragraph 59 as argued by the

respondent according to a first line of argument in its statement of grounds of appeal.

The Board considers that, contrary to the respondent's understanding, paragraph 59 is not directed to a generic disclosure of the patent. The paragraph reads *"While the disclosure has been described in relation to the use of short height HP/IP fixed blades in a steam turbine of the low reaction disc and diaphragm type, it can also be applicable to other types of axial flow turbine and compressor, and to moving airfoil blades as well as fixed airfoil blades"*. The paragraph therefore makes reference to the specific embodiment described before, i.e. to the use of the previously described (stationary) blade in a "short height HP/IP fixed blades in a steam turbine of the low reaction disc and diaphragm type".

This specific use is set out in paragraph 45, at the beginning of the description of the specific embodiment of which the blade in Figure 4 is a part. Therefore the skilled person would have understood directly and unambiguously from the final statement in paragraph 59 that this previously-described blade for use in that specific, exemplary embodiment could be used in other types of axial flow turbines and compressors. In view of previous statements in paragraphs 2 and 43, which explicitly disclose that the axial flow turbomachine employing the turbine blade can be a steam or gas turbine, the skilled person would have understood the expression "other types" mentioned in paragraph 59 unambiguously to mean gas turbines.

The respondent's further arguments, based on an assumed inaptitude of the specific fixed blade geometry shown in Figure 4 for application as a rotating component in

a turbine section of a gas turbine, are found unconvincing. As set out above, claim 1 is not limited to an application as a rotating component, as argued by the respondent. In addition, D3 explicitly envisages the application of the blade as a rotating component and also in different sections of a gas turbine.

The Board concludes and thereby confirms the view of the opposition division that feature 1.1.a is also disclosed in D3.

8.4 The Board also considers feature 1.7 to be disclosed in combination with features 1.1.a, 1.1.b (and the remaining features 1.1.c, 1.2 to 1.6) in D3. In fact, the respondent did not dispute that D3 disclosed feature 1.7 as such in relation to the embodiment of Figure 4, as is apparent from item 15.1 of the impugned decision. The respondent, rather, disputed that the specific geometric blade configuration defined by feature 1.7 for a gas turbine blade according to features 1.1.a and 1.1.b was disclosed on the basis of the general disclosure in paragraph 34 together with paragraphs 2, 43 and 59, on which the opposition division had also relied, because the options disclosed in the cited paragraphs amounted to far too many possibilities, contrary to specific disclosure. The Board does not find this line of argument convincing since

- (i) the reference by the opposition division to paragraph 34 of D3 was only an additional argument which did not contradict the previous finding in point 15.2, on the upper half of page 11 of the impugned decision, relating to the disclosure of the combination of features 1.1.a, 1.1.b,

- 1.1.c, 1.2 to 1.7 by paragraphs 2, 43 and 59 together with Figure 4, and moreover
- (ii) claim 1 covers both rotating and stationary blades, so anyway no selection from a number of possible options would be required in this respect on the basis of the embodiment of Figure 4, which indisputably describes a blade with feature 1.7 (see also paragraph 52 of D3), and
 - (iii) claim 1 also not being limited in regard to the location of the rotating or stationary blade in any particular section (compressor or turbine) of such gas turbine engine, the teaching of paragraph 59 of D3 to apply the specific steam turbine (fixed) blade described to other turbo-machinery would have led the skilled person directly and unambiguously to apply it to a gas turbine, specifically mentioned in paragraphs 2 and 43 as an alternative axial flow turbomachine to a steam turbine, so
 - (iv) as a consequence the facts underlying decision T 12/81 are not comparable with those of the present case.

9. The only distinguishing feature of claim 1 compared with the blade disclosed in D3 is thus the claimed aspect ratio range ("the blade provides an aspect ratio span/axial chord length at $5\% \pm 5\%$ span ranging from 1,6 to 2,1 [sic]"), as also argued by the appellant.
10. As noted in the Board's communication pursuant to Article 15(1) RPBA, the technical effect attributed to this single distinguishing feature by the opposition division - albeit with respect to some other piece of prior art, resulting, however, in the same single

distinguishing feature - seemingly had no basis in the patent, as argued by the appellant in sections 2.1.4 and 2.1.5 of its statement of grounds of appeal. Indeed, paragraph 20 of the patent in suit, which is the only mention of this claimed aspect ratio range, is silent as to any effect achieved by this feature. The assumed effect of improved vibrational behaviour is rather speculative, in particular since a number of other blade parameters (blade structure, hollow or massive, wall thickness, etc.) may influence the natural frequencies.

Therefore the Board also agrees with the appellant that, in the absence of any technical effect achieved by the single distinguishing feature, the objective technical problem can be formulated as to further geometrically specify the blade disclosed in D3.

11. It was not disputed that the aspect ratio as defined in the characterising portion of claim 1 is well known to the skilled person in the technical field of axial flow turbomachine blades. The particular range selected constitutes an arbitrary selection and therefore does not involve an inventive step.
12. The respondent, apart from maintaining its unsubstantiated view that the distinguishing feature in the characterising portion of the claim (together with a further allegedly distinguishing feature 1.7) influenced the natural vibration frequencies of the blade without worsening the aerodynamic behaviour, did not indicate any passage in the patent supporting its allegation of the technical effect, in particular not in relation to the claimed aspect ratio range.

The respondent did not submit any argument either in reply to the Board's communication in which the Board had endorsed the appellant's view in regard to the arbitrariness of the claimed aspect ratio range. Consequently, the Board had no reason to change its provisional opinion.

13. Since claim 1 of auxiliary request 3 does not involve an inventive step (Article 56 EPC), the patent cannot be maintained in this form.

Auxiliary requests 4 and 5 as filed during the opposition procedure

14. The respondent has only provided comments as regards the appellant's objections against patentability of auxiliary requests 4 and 5 filed in the opposition proceedings, without however specifying, formulating or filing corresponding explicit requests in this regard. Even after the Board pointed out this deficiency in the communication under Article 15(1) RPBA and the corresponding lack of substantiation under Article 12(3) RPBA (see above item V.), the respondent did not provide further submissions in this respect.

Thus the Board's assessment is to be based on the submissions on file. Even if the respondent's comments were to be interpreted as an implicit reference to the auxiliary requests 4 and 5 filed at the department of first instance, the provisions of Article 12(3) RPBA are not complied with, as it is required *inter alia* to specify expressly all requests relied on.

The Board has therefore exercised its discretion under Article 12(5) RPBA not to admit the submissions directed to auxiliary requests 4 and 5 filed only

before the opposition division into the appeal proceedings.

15. In the absence of any set of claims which meets the requirements of the EPC, the Board can only accede to the appellant's request that the patent be revoked.

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:



D. Grundner

P. Cipriano

Decision electronically authenticated