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**Datasheet for the decision
of 26 April 2010**

Case Number: T 0936/08 - 3.2.03

Application Number: 03776924.7

Publication Number: 1575727

IPC: B22F 7/00

Language of the proceedings: EN

Title of invention:

Manufacturing method for obtaining high-performance components for gas turbines and components thus obtained

Applicant:

Nuovo Pignone Holding S.P.A.

Headword:

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Relevant legal provisions:

EPC Art. 84, 54
EPC R. 102(g)

Relevant legal provisions (EPC 1973):

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Keyword:

"Clarity and novelty: no"
"Decision on the state of the file - dismissal of appeal on grounds previously communicated to the appellant"

Decisions cited:

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Catchword:

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Case Number: T 0936/08 - 3.2.03

D E C I S I O N
of the Technical Board of Appeal 3.2.03
of 26 April 2010

Appellant:

Nuovo Pignone Holding S.P.A.
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Representative:

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Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 20 December 2007
refusing European application No. 03776924.7
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: U. Krause
Members: Y. Jest
K. Garnett

Summary of Facts and Submissions

I. On 25 February 2008 the appellant (applicant) lodged an appeal against the decision of the examining division to refuse European patent application No. 03776924.7 (based on International application No. PCT/EP2003/014060 published with the International Publication No. WO 2004/054744).

By its decision dated 20 December 2007 the examining division refused the European application 03776924.7 in response to the applicant's request of 23 November 2007 for a decision according to the state of the file. In the grounds for the decision, reference was made to the objection raised in two previous notifications dated 21 July 2006 and 28 February 2007, namely:

- that the application documents contained formal deficiencies with respect to the requirements of Articles 123(2) and 84, and
- that the claimed subject-matter was anticipated by the state of the art disclosed in patent document US-A- 6 322 897 (D1) and therefore lacked novelty in the meaning of Article 54(1),(2) EPC.

II. By fax received on 25 April 2008 the appellant filed the grounds of appeal and requested the contested decision to be set aside and a patent granted on the basis of an amended set of claims 1 to 4 submitted with said fax.

The appellant also requested oral proceedings on an auxiliary basis.

Claims 1 to 4 submitted by fax on 25 April 2008 read as follows:

1. "Manufacturing method for obtaining improved high-performance components (110) for gas turbines, wherein the method includes at least one process involving powder sintering or powder metallurgy of metallic and non-metallic powders, the method **characterized in that** a homogeneous/heterogeneous dispersion of the powders is performed in a predetermined manner so as to provide surfaces with suitable concentrations of high-refractory non-metallic powders so that different physical/chemical properties are provided at different points within the components (110)."

2. "Manufacturing method according to Claim 1, further characterized in that said dispersion of said powders is performed in a predefined manner resulting in perfect fixing to metal surfaces in a zone (16) forming an interface and bond with internal bodies (12) produced by means of microfusion or mechanical machining."

3. "Improved high-performance components (110) for gas turbines, the components obtained by means of at least one process involving powder sintering or powder metallurgy of metallic and non-metallic powders, the components **characterized by**, in the at least one process, a homogeneous/heterogeneous dispersion of the powders being performed in a predetermined manner so as to provide surfaces with suitable concentrations of high-refractory non-metallic powders so that different

physical/chemical properties are provided at different points within the components (110)."

4. "Improved high-performance components according to Claim 3, further characterized in that, in the at least one process, said dispersion of said powders is performed in a predefined manner resulting in perfect fixing to metal surfaces in a zone (16) forming an interface and bond with internal bodies (12) produced by means of microfusion or mechanical machining."

III. In the statement setting out the grounds of appeal, the sole substantive arguments (page 2, third paragraph) advanced by the appellant concerning the issue of lack of novelty raised by the examining division was that none of the cited documents disclosed the variation of physical and chemical properties at different points without further reasoning or argumentation. To the issue of clarity raised by the examining division the appellant mainly stated that the terms used in the claims would be clear to the person skilled in the art.

IV. Oral proceedings were appointed, as requested by the appellant on an auxiliary basis. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to the summons to attend oral proceedings, the Board gave a preliminary assessment of the case. The Board, in particular, raised objections of lack of clarity and disclosure (Articles 84 and 83 EPC) and of lack of novelty (Articles 52(1) and 54 EPC) with regard to the claims on file. More particularly, the Board commented as follows:

"2. Clarity (art.84 EPC) - Disclosure (Art.83 EPC)

2.1 The board agrees with findings of the examining division when addressing the following deficiencies under article 84 EPC of the claimed subject-matter:

- the broad and unclear meaning of the feature "suitable (or predetermined) concentrations of high-refractory non-metallic powders", and
- the attempt to define the claimed subject-matter essentially by the effects or results to be achieved in dependent claims 2 and 4.

2.2 Additionally the board considers that the characterising portions of both independent claims 1 and 3 merely consist in a result to be achieved rather than concrete method-steps or constructional properties of the component for the following reasons.

Claim 1 lacks any indication defining the way powders are dispersed homogeneously/heterogeneously or what has to be construed by the claimed expression "predetermined manner". The sole additional comment made with this respect relates to a rather vague result to be achieved on the manufactured product, i.e. "to provide surfaces with suitable concentrations of high-refractory non-metallic powders". It might be noted that the definition of the claimed result to be achieved is vague too because of the undefined or unclear meaning of the expression "suitable" in this context.

The newly added feature "so that different physical/chemical properties are provided at different points within the components" cannot help for clarifying the claimed method, because it is itself too vague or conveys an undefined concept. This is mainly due to the fact that neither the type of chemical/physical difference nor the location of "the different points" is properly defined.

It must be noted in this context that the slash between "homogeneously" and "heterogeneously" and "physical" and "chemical" in claim 1 is not clear as it could mean "and", "or" or "and/or". In all cases the related features would seem to be known by D1 which mentions the variation of both corrosion/oxidation resistance (chemical property) by sintering successive (homogeneous) powder layers having different compositions of metallic and non-metallic powder, the mixture forming a heterogeneous powder dispersion.

The current characterising portion of claim 1 could therefore even apply to or cover the embodiment of D1.

- 2.3 To meet the aforementioned lack of clarity additional features should thus be incorporated in the claims, provided however that such additional features were originally disclosed in the application.

The application as originally filed seems however to fail sufficiently to disclose the invention as currently pursued.

The description gives no clear indication of how to generally perform the method-step for dispersing the powders but is limited to a broad reference to the results to be obtained, i.e. "different chemical/physical properties in different points with a relative variability determined by the functional specification defined during the design stage (page 8, lines 7 to 10)". Furthermore, it appears that no concrete example is given in the description of the application which could demonstrate how to perform a homogeneous/heterogeneous dispersion of specific powders or powder concentrations for achieving the claimed results.

Beyond the clarity deficiencies in the claims currently on file, the application would thus appear to contravene the requirement of article 83 EPC, the invention being not sufficiently described so as to enable the skilled person to perform it.

3. Novelty

From the disclosure of the invention based on the application as a whole, it is not possible to distinguish any difference in the dispersion of powders between the invention and for instance D1 (see for instance method-claim 18), which describes in detail a gas turbine component made of a metal-ceramic gradient material, having a metal-rich zone and a ceramic-rich zone. In the grounds of appeal (third paragraph of page 2), the appellant mainly stated that none of

the cited documents disclosed the variation of physical and chemical properties at different points without further reasoning or argumentation. This statement has not been based on a detailed comparative analysis and does not take all due consideration of the fact that the material taught in D1 is a metal-ceramic gradient material. The claimed subject-matter, as far as it can be construed, would thus lack novelty or at least inventive step when compared to D1."

- V. In reply to the summons to attend oral proceedings, the appellant - without submitting any substantive argument in reply to the objections noted by the Board - indicated by letter dated 6 April 2010 that it withdrew the previous request for oral proceedings and requested that a written decision be issued in accordance with the current state of the file. In a communication dated 16 April 2010 the Board subsequently informed the appellant that the oral proceedings appointed for 7 October 2010 were cancelled.

Reasons for the Decision

1. The appeal is admissible.
2. In the communication pursuant to Article 15(1) RPBA annexed to the summons to oral proceedings the Board explained in detail why in its preliminary opinion the subject-matter defined in the set of claims 1 to 4 is not clearly defined (Article 84 EPC) or even not sufficiently disclosed (Article 83 EPC) and in any case,

is not novel with regard to the disclosure of document D1: US-A- 6 322 897 (Articles 52(1) and 54 EPC).

3. In the course of the proceedings the appellant made no substantive submissions in reply to the detailed objections raised by the Board in its communication and, in addition, requested a decision on the state of the file and withdrew the request for oral proceedings - which were subsequently cancelled by the Board. The appellant has therefore not availed itself of the opportunity to reply to the preliminary view expressed by the Board in its communication.
4. After consideration of the issues addressed in the aforementioned communication and in the absence of any attempt by the appellant to refute or overcome the objections raised with regard to the set of claims 1 to 4, the Board sees no reason to depart from the preliminary opinion expressed in the aforementioned communication.
5. Accordingly, noting that the appellant has had, and has failed to use, the opportunity to present comments on the objections raised by the Board (Article 113(1) EPC), the Board concludes that the set of claims on file does not comply with the formal requirements of Articles 84 and 83 EPC and with the substantive requirements of Articles 52(1) and 54 EPC, and that consequently the request of the appellant is not allowable.

The appeal must therefore be dismissed for the reasons already communicated to the appellant and reproduced in point IV above (Rule 102(g) EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

A. Counillon

U. Krause