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**Datasheet for the decision
of 11 May 2011**

Case Number: T 1443/09 - 3.2.07

Application Number: 04252527.9

Publication Number: 1473378

IPC: C23C 4/02

Language of the proceedings: EN

Title of invention:

Method for applying or repairing thermal barrier coatings

Applicant:

GENERAL ELECTRIC COMPANY

Headword:

-

Relevant legal provisions:

EPC Art. 111(1)
EPC R. 103(1)a), 111(2)

Relevant legal provisions (EPC 1973):

-

Keyword:

"Decision on the state of the file: not reasoned"
"Substantial procedural violation (yes)"
"Reimbursement of the appeal fee (yes)"

Decisions cited:

T 1309/05, T 1356/05, T 1709/06, T 1442/09

Catchword:

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Case Number: T 1443/09 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 11 May 2011

Appellant: GENERAL ELECTRIC COMPANY
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Schenectady, NY 12345 (US)

Representative: Goode, Ian Roy
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 5 February 2009
refusing European patent application
No. 04252527.9 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: H. Meinders
Members: H. Hahn
E. Dufrasne

Summary of Facts and Submissions

- I. The applicant lodged an appeal against the decision of the Examining Division to refuse the European patent application No. 04 252 527.9 with a decision according to the state of the file.
- II. With its grounds of appeal dated 17 December 2008 the appellant requested to set aside the decision and to grant a patent on the basis of the claims 1-4 of one of the primary and auxiliary request filed together with the grounds of appeal. As a subsidiary request oral proceedings were requested.
- III. In the present decision the following documents of the examination proceedings are cited:
- D1 = EP-A-1 016 735
 - D2 = GB-A-2 375 725
 - D3 = EP-A-1 304 446
 - D4 = US-B1-6 471 881
 - D5 = EP-A-0 808 913
 - D6 = Database WPI Section Ch, Week 199637 Derwent Publications Ltd., London, GB; Class M13, AN 1996-368730 XP002294646 & JP 08 176781 A
 - D7 = US-A-5 409 748
 - D8 = US-A-5 866 271
 - D9 = WO-A-99 43861
 - D10 = EP-A-1 260 602
 - D11 = US-A1-2002 009611
- IV. In the course of the examination proceedings the appellant, in response to the first substantive communication of the Examining Division dated

19 December 2005, filed with its letter dated 28 June 2006 an amended set of claims 1-10 and submitted arguments concerning novelty and inventive step.

In response to the second substantive communication of the Examining Division dated 16 July 2007 the appellant filed with its letter dated 16 January 2008 an amended set of claims 1-4 together with arguments concerning novelty and inventive step. In that letter the appellant also requested oral proceedings as an auxiliary request.

A summons dated 9 June 2008 to oral proceedings to be held on 2 December 2008 was issued by the Examining Division. In the third substantive communication that was annexed to that summons the Examining Division set out its opinion regarding the amended set of claims 1-4 filed with letter of 16 January 2008.

With letter dated 13 November 2008 the appellant withdrew its request for oral proceedings and requested an appealable written decision in accordance with the current state of the file.

The wording of the main claims of those requests is reproduced in the reasons for this decision, for a clearer understanding of the reasoning of the Examining Division in this respect.

V. The grounds of the decision of the Examining Division are as follows:

"In the communication(s) dated 19.12.2005, 16.07.2007, 9.06.2008 the applicant was informed that the

application does not meet the requirements of the European Patent Convention. The applicant was also informed of the reasons therein.

The applicant filed no comments or amendments in reply to the latest communication but requested a decision according to the state of the file by a letter received in due time on 18.11.2008.

The application must therefore be refused."

VI. With a communication dated 10 September 2010 the Board gave its preliminary and non-binding opinion and expressed the view that the decision of the Examining Division was deficient in that it was not reasoned as required by Rule 111(2) EPC and that it intended to remit the case to that department of first instance for further prosecution and to reimburse the appeal fee. The appellant was asked whether or not it maintains its request for oral proceedings.

VII. With letter dated 11 October 2010 the appellant informed the Board "*that conditional upon their remitting the application to the Examining Division for further prosecution the previous request for Oral Proceedings is hereby withdrawn*".

Reasons for the Decision

Lack of reasoning in the decision - substantial procedural violation

1. The first substantive communication of the Examining Division referred to in the impugned decision was based on claims 1-10 as originally filed.

1.1 The three independent claims 1, 6 and 7 as originally filed read:

"1. A method for applying a thermal barrier coating (150) to an underlying metal substrate (100) where the metal substrate (100) has an overlying aluminide diffusion coating (106), the method comprising the steps:

(1) treating the aluminide diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142); and
(2) plasma spraying an overlay alloy bond coat material on the treated diffusion coating (136) to form an overlay bond coat layer (142)."

"6. A method for repairing a thermal barrier coating (128) applied by physical vapor deposition to an underlying aluminide diffusion coating (106) that overlays a metal substrate (100), the method comprising the steps of:

(1) removing the physical vapor deposition-applied thermal barrier coating (128) from the underlying aluminide diffusion coating (106);

(2) treating the diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142); and
(3) plasma spraying an overlay alloy bond coat material on the treated diffusion coating (136) to form an overlay alloy bond coat layer (142)."

"7. A method for repairing a thermal barrier coating (128) applied by physical vapor deposition to an underlying aluminide diffusion coating (106) that overlays a metal substrate (100) of at least one part (26) of an assembled turbine component (10), the method comprising the steps of:

(1) while the turbine component (10) is in an assembled state, removing the physical vapor deposition-applied thermal barrier coating (128) from the underlying aluminide diffusion coating (106) of the least one part (26);

(2) treating the diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142);

(3) plasma spraying an overlay alloy bond coat material on the treated diffusion coating to form an overlay alloy bond coat layer (142); and

(4) plasma spraying a ceramic thermal barrier coating material on the overlay alloy bond coat layer (142) to form a thermal barrier coating (150)."

1.2 In point 2 of this communication the Examining Division raised a novelty objection with respect to the subject-matter of claim 1 in view of D1 and D2 by stating

"D1 and D2 disclose a method for applying a thermal barrier coating to an underlying metal substrate where

the metal substrate has an overlaying aluminide diffusion coating, comprising grit blasting the aluminide diffusion coating and plasma spraying a thermal barrier coating on the diffusion layer (see D1: page 3, col. 3, lin. 53-col. 4, lin. 2; col. 4, lin. 33-35; page 4, col. 5, lin. 29-col. 6, lin. 17; claims 1, 2, 4, 5 and D2: page 2, lin. 19-32; page 5, lin. 22-29; page 6, lin. 1-6; lin. 15-20; lin. 28-32; page 8, lin. 31-page 9, lin. 11, lin. 26-28; claims 12-16)."

and in point 3 another novelty objection with respect to the subject-matter of claims 6 and 7 in view of D3, D4 and D5 by stating "*Documents D3 and D4 and D5 disclose a method for repairing a thermal barrier coating applied by physical vapor deposition to an underlying aluminide diffusion coating that overlays a metal substrate comprising the steps of removing the physical vapour deposition applied thermal barrier coating, texturing the diffusion coating and plasma spraying a thermal barrier coating over the textured surface (see D3: page 3, lin. 17-30; page 4, lin. 4-50; Claims 1, 6, 7; D4: col. 4, lin. 39-49; claims 10, 13 and D5: claims 1-3, 7, 9).*"

In point 4 of this communication it further considered that "*Dependent claims 2-5, 8-10 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to novelty and/or inventive step, the reasons being as follows: the features are known from D1-D5 and D6 (thermal spraying a coating on a bond coat, having a surface roughness of 30-250 $\mu\text{m Ra}$, applied on a substrate).*"

1.3 A comparison of the wording of claims 1, 6 and 7 as originally filed (see point 1.1 above) with the statement made in points 2 and 3 of the first communication (see point 1.2 above), respectively, shows that this communication neither contains an explanation as to why the method for applying a thermal barrier coating (TBC) according to D1 or D2 fulfils **all** the requirements as set out by the features of said claim 1, or as to why the method for repairing a thermal barrier coating according to either D3, D4 or D5 fulfils **all** the requirements as set out by the features of said claim 6. It also does not indicate why the subject-matter of independent claim 7 would be anticipated by documents D3-D5 or why the subject-matter of dependent claims 2-5 and 8-10 as originally filed would be rendered obvious by the cited prior art.

Points 2 to 4 of the first communication contain only allegations without giving any reasoning for the lack of novelty, e.g. as to why grit blasting or texturing falls under the definition of making an aluminide diffusion coating more receptive to the adherence of a plasma spray-applied overlay alloy bond coat layer. The allegation additionally made in point 4 further does not give any references in the cited documents D1 to D6 for the features of the dependent claims allegedly known therefrom, or as to why the person skilled in the art would combine the coating method of e.g. D6 with the TBC repairing methods of either D3 or D5, i.e. which objective technical problem should be solved by the person skilled in the art.

2. As a response to the first communication the appellant filed with its letter dated 28 June 2006 an amended set

of claims 1-10. It stated that claims 1, 6 and 7 have been amended by changing "treating" to "roughening" and "treated" to "roughened" which has a basis at page 13 of the description as originally filed. Furthermore, it submitted arguments concerning novelty and inventive step, as follows.

D1 relating to blasting a substrate prior to applying the coating material and D2 relating to the mechanical treatment of an article comprising a metallic substrate were not believed to be concerned with the problem presented and solved by the claims of the present application which were directed to a method of applying a thermal barrier coating wherein the metal substrate has an overlying aluminide diffusion coating; and to a method for repairing an existing thermal barrier coating applied by PVD to the diffusion coating.

D3 to D6 were also not considered to be relevant, as they relate to different problems and solutions: D3 being directed to a combination of groove design and laser surface incident angles fabricated into a bond coat to achieve spallation resistance, D4 being also directed to grooves between the bond coat/substrate and a ceramic thermally insulating layer, D5 disclosing cleaning a bond layer exposed to spallation and then texturing the same before depositing a ceramic material on the bond layer to form a ceramic repair layer that completely covers the bond layer, while D6 disclosing a coating formed by applying a coating composition containing a binder, a compound having a chelated-forming ability and an aggregate to form a coating on a steel material.

2.1 Independent claims 1, 6 and 7 of this set of claims read as follows (amendments as compared to claims 1, 6 and 7 as originally filed are in bold):

"1. A method of applying a thermal barrier coating (150) to an underlying metal substrate (100) where the metal substrate (100) has an overlying aluminide diffusion coating (106), the method comprising the steps:

(1) **roughening** the aluminide diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142); and
(2) plasma spraying an overlay alloy bond coat material on the **roughened** diffusion coating (136) to form an overlay bond coat layer (142)."

"6. A method for repairing a thermal barrier coating (128) applied by physical vapor deposition to an underlying aluminide diffusion coating (106) that overlays a metal substrate (100), the method comprising the steps of:

(1) removing the physical vapor deposition-applied thermal barrier coating (128) from the underlying aluminide diffusion coating (106);
(2) **roughening** the diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142); and
(3) plasma spraying an overlay alloy bond coat material on the **roughened** diffusion coating (136) to form an overlay alloy bond coat layer (142)."

"7. A method for repairing a thermal barrier coating (128) applied by physical vapor deposition to an underlying aluminide diffusion coating (106) that

overlays a metal substrate (100) of at least one part (26) of an assembled turbine component (10), the method comprising the steps of:

(1) while the turbine component (10) is in an assembled state, removing the physical vapor deposition-applied thermal barrier coating (128) from the underlying aluminide diffusion coating (106) of the least one part (26);

(2) **roughening** the diffusion coating (106) to make it more receptive to adherence of a plasma spray-applied overlay alloy bond coat layer (142);

(3) plasma spraying an overlay alloy bond coat material on the **roughened** diffusion coating to form an overlay alloy bond coat layer (142); and

(4) plasma spraying a ceramic thermal barrier coating material on the overlay alloy bond coat layer (142) to form a thermal barrier coating (150)."

2.2 The second substantive communication of the Examining Division, of 16 July 2007, was based on these amended claims 1-10. Initially it stated that the applicant's arguments had been carefully considered, but that a number of objections remained. Thereafter D2, D3, D5 and the newly cited documents D7 to D10 were referred to.

In point 4 of this communication the Examining Division maintained its objection of lack of novelty, in stating: "*Document D7 discloses a method of reinforcing the bonding strength between a high temperature oxidation corrosion protecting ceramic coating layer an [sic] a base substrate comprising the following steps of 1) applying an aluminum diffusion coating on the substrate 2) grinding the aluminum diffusion coating to a certain*

surface roughness 3) plasma spray coating a MCrAlY [sic] layer on the aluminum diffusion layer and 4) plasma spraying a ceramic layer" (see example 1; col. 3, lin. 4-24; col. 4, lin. 30-32; claims 1, 2)" (emphasis added by the Board).

It further stated in point 5 that claim 1 lacked an inventive step by stating in point 5.5 "*apparently the skilled person, apart from the known D7 (see point 4), would obviously combine the closely related teachings of D2 or D8 and D10 and thereby arrive directly at the same coating method" (emphasis added by the Board) after having given a short abstract of the mentioned documents.*

In point 7 the Examining Division considered that the subject-matter of claims 6 and 7 lacked an inventive step. After giving in point 7.1 an abstract of the disclosures of D3 and D5 it remarked in point 7.2 that the difference with respect to the application resided in spraying an overlay alloy bond coat material on the roughened aluminide diffusion coating before the spraying of the ceramic thermal barrier coating to then conclude in point 7.3 "*As document D7 discloses the same coating and method of coating on "localized" portions of the substrate, the skilled person would obviously combine the teachings of D3 or D5 and D7 and thereby come to a method of repairing a locally damaged thermal barrier coating".*

In point 8 claims 1 and 8 [sic] were objected to under Article 84 EPC for not being clear since in both claims the matter for which protection is sought, namely "a method for applying a thermal barrier coating to an

underlying metal substrate" is not included in the characterising part.

In point 9 it finally concluded that *"At least some of the objections raised above are such that there appears to be no possibility of overcoming them by amendment. Refusal of the application under Article 97(1)[sic] EPC is therefore to be expected."*

- 2.3 This second communication clearly does **not** contain anything dealing with the arguments submitted by the appellant, particularly not as to **why** they cannot be accepted.

Only the novelty objection with respect to claim 1 on the basis of D7 and the explanations given in point 4 of this communication are considered to be understandable.

The second communication, however, does **not** contain any comprehensible reasoning as to why the person skilled in the art - taking account of the statement in point 5.3: *"the only difference between the application and D2 and D8 is that an overlay bond coat has been applied by thermal spraying on the aluminide diffusion coating before the sprayed ceramic thermal barrier"* - would combine the teachings of D2 or D8 with that of D10 in order to arrive at the subject-matter of claim 1. This is particularly so as D10 does not disclose any such (roughening) step and the Board is not able to derive from the schematic drawing according to figure 1 of D10 - to which the Examining Division referred to in point 5.4 of this communication - that the five plasma sprayed layers actually have a rough structure.

Furthermore, the said conclusion with respect to "the only difference between the application" and D8 is incorrect since - as mentioned in point 5.2 of the communication - according to D8 the superalloy substrate and not the subsequently applied aluminide diffusion coating is grit blasted.

The second communication also does **not** contain any comprehensible reasoning as to why the person skilled in the art - taking account of the statement in point 7.2, namely that "*the only difference between D3 or D5 and the application is the spraying of an overlay bond coat material on the roughened aluminide diffusion coating before the spraying of the ceramic thermal barrier coating*" - would combine the teachings disclosed in documents D3 or D5 with that of D7 (relating to the coating of a heat radiating tube for an annealing furnace) to arrive at the subject-matter of claim 6, let alone to that of claim 7 requiring an unassembled turbine component (see point 2.1 above).

The clarity objection raised in point 8 of the second substantive communication under Article 84 EPC with respect to claims 1 and 8 cannot be understood either since claim 1 explicitly comprises the - allegedly missing - feature "a method for applying a thermal barrier coating to an underlying metal substrate" in the characterising part, while claim 8 represents a dependent claim referring to independent process claim 7 which defines with different terms said allegedly missing feature as feature (4) (see point 2.1 above).

3. As a response to this second communication the appellant filed with its letter dated 16 January 2008 an amended set of claims 1-4 being identical with claims 7-10 as filed with letter dated 28 June 2006 in combination with an adapted description. The amendments were again supported by arguments concerning novelty and inventive step.

In particular it was argued that claim 1 had been restricted to a method for repairing a TBC coating of a turbine engine component by PVD and that *"The specific problem addressed by the present invention is that for turbine components comprising an assembly of parts machined then brazed to a supporting structure, removing a PVD-applied TBC removes the underlying aluminide diffusion coating, the repair of which then proving difficult. D3 addresses the problem of repairing the thermal barrier coating in areas where it has already been removed but does not address the problem of repairing the underlying aluminide diffusion coating. Therefore, firstly, D3 does not disclose a step of removing a physical vapour deposited applied TBC; secondly, D3 does not disclose the step of plasma spraying an overlay alloy bond coat layer onto an aluminide diffusion coating; and thirdly, D3 does not disclose a step of plasma coating a TBC on the overlay alloy bond coat layer. D5 discloses a repair method in which an exposed bond layer coated on an article such as a gas turbine engine component is grit blasted to form a textured surface. A ceramic repair layer constituting a thermal barrier coating is then coated onto the bond layer by plasma spray techniques. Therefore, D5 also does not address the problem of repairing an underlying aluminide diffusion coating"*.

As a consequence, D5 would not disclose the aforementioned two steps.

It was further argued that D7 discloses treating a metal alloy tube prior to applying an aluminium diffusion sub layer. An MCrAlY alloy coating and a ceramic coating are then applied by plasma spraying but D7 does not address the problem of repairing TBC's in parts of assembled turbine components nor that this method could be used for repairing thereof. *"As there is no reason which would lead the skilled person to consider incorporating a coating system such as is known of D7 into the repair methods of D3 or D5, to thereby arrive at the subject-matter of claim 1, it is respectfully submitted that claim 1 is novel and inventive"*.

3.1 For claim 1 of this set of claims see point 2.1 above.

3.2 The third substantive communication of the Examining Division dated 9 June 2008 was annexed to the summons to oral proceedings to be held before the Examining Division and scheduled for 2 December 2008. It was based on this amended set of claims 1-4.

Therein it was initially stated *"This communication is a reply to your letter of 16.01.2008 with replacement claims 1-4. Your arguments have been carefully considered by the examining division, however the following objections remain. It is the preliminary opinion of the examining division that the new claims 1-4 do not comply with the requirements of the EPC and the application should be refused (Art. 97 (2) EPC). According to your request Oral Proceedings are summoned."*

The reasons for the preliminary opinion are given below." Thereafter documents D3, D5, D7 and additionally the new document D11 found in a further search were cited.

Under point 4 of the communication it stated that claim 1 does not meet the requirements of Article 84 EPC *"As already mentioned, removing a PVD-applied TBC removes the underlying aluminide diffusion coating. Therefore it is not clear how this aluminide diffusion coating can still be roughened, as claimed in step 2 of claim 1."*

Subsequently, in points 5 and 5.1 the Examining Division considered that claim 1 lacks an inventive step since *"The problem to be solved is the same as addressed by D3 and D5, namely a method of repairing a thermal barrier coating (TBC) (implies that the TBC is damaged or spalled on at least an area of a part of an assembled turbine component) applied by physical vapour deposition to an underlying aluminide diffusion coating that overlays an assembled turbine component (see D3, § 0008, page 2 and D5: col. 2, lin. 16-col.3, lin. 4)."* In the following points 5.2 and 5.3 of the communication it considered that D3 discloses well known stripping methods to remove the damaged or spalled TB which can be locally removed with minimally affecting the underlying aluminide bond coat and repaired as disclosed in claims 1-10 of D3, while D5 discloses treating the bond layer so as to texture a surface thereof and depositing a ceramic layer by plasma spraying.

Thereafter the Examining Division concluded in points 5.4 and 5.5 that *"the only difference between D3 or D5 and the application is that on the roughened diffusion coating an overlay alloy bond coat material is plasma sprayed"* and that *"D7 discloses the reinforcing of the bonding strength between a locally applied plasma sprayed ceramic coating layer and an aluminium diffusion coating that overlays a substrate comprising roughening the aluminium diffusion coating and plasma spray coating a McrALY [sic] layer on the aluminium diffusion layer before plasma spray coating the ceramic coating layer on the McrALY [sic] layer (see col. 3, lin. 4-37; col. 4, lin. 1-32; example 1, Table 2)"* while in point 5.6 it remarked *"D11 discloses the coating and "refurbishing" of a turbine component comprising the steps of removing the thermal barrier coating, applying an inner and outer aluminide layer and depositing a replacement thermal barrier coating. The inner and outer aluminide coating layers can be applied by a ATP-process (see §0006, page 1; §0019, 0020, page 4; abstract and fig. 2)."*

In the subsequent point "5" [should correctly be numbered 6] of the communication the Examining Division further stated that *"The skilled person would therefore regard it as a normal option to combine the closely related features of D3 or D5 and D7 and D11 to solve the problems of repairing a TBC applied by PVD to an underlying aluminide diffusion coating that overlays a metal substrate of at least one part of an assembled turbine component"* and finally in point 6 it remarked *"The subject of the Oral proceedings will be whether the claimed subject-matter involves an inventive step"*

in the sense of Article 56 EPC with respect to D3 or D5 and D7/D11."

3.3 From the above it is already clear that also this third communication contains only allegations. It neither deals with the appellant's arguments in support of inventive step of claim 1, nor does it contain any comprehensible reasoning concerning the alleged lack of inventive step. In particular, it does not apply the problem-solution approach. It does not explain as to why an - allegedly - obvious combination of the three documents D3 or D5 and D7 and D11 would allow the person skilled in the art to arrive at the subject-matter of claim 1, let alone explains as to why in the present case a combination of the teachings of these three documents would produce a feasible attack on inventive step of the subject-matter of claim 1.

3.3.1 With respect to the alleged lack of clarity the Board further remarks that on the one hand the Examining Division, in point 3 of this communication in the context of the problems to be solved, notes that "some or all of the underlying aluminide diffusion coating can be removed as well" and in point 5.2 thereof with respect to D3 states that " ... the TBC can be locally removed with minimally affecting the underlying aluminide bond coat ...".

On the other hand, the Examining Division states in point 4 that removing a PVD-applied TBC removes all the underlying aluminide diffusion coating, so that it would not be clear as to how this (removed) aluminide diffusion coating could be roughened. Apart from the fact that the Examining Division has not quoted any

passage in the application which would provide support for this allegation this is inconsistent with the aforementioned statements and it is contrary to the opinion of the Examining Division that the TBC can be removed such that basically only the TBC layer is removed, if necessary only to a certain extent, i.e. that it can be partly removed. Consequently, it is actually possible that the remaining aluminide diffusion coating is roughened. This fact appears to be also evident from the whole specification of the present application which makes it clear that first (only) the TBC is removed and then the aluminide diffusion coating is roughened (see e.g. page 3, lines 14 to 16; page 5, lines 8 to 19; page 12, line 13 to page 14, line 2; figure 5 to 7 of the application as originally filed). Therefore this allegation cannot hold.

4. The impugned decision according to the state of the file merely refers to "the communication(s) dated 19.12.2005, 16.07.2007, 09.06.2008" and states that "the applicant was informed that the application does not meet the requirements of the European Patent Convention. **The applicant was also informed of the reasons therein**" (emphasis added by the Board) and that the applicant filed no comments or amendments in reply to the latest communication.

- 4.1 From the above analysis and discussion of the content of these three substantive communications the Board, however, has to conclude that the impugned decision falls short of revealing the reasons which led the department of first instance to conclude lack of inventive step, or lack of clarity for that matter.

4.2 Furthermore, contrary to what is stated in the second and third communications ("the applicant's explanations ... have been carefully considered") the communications show that the Examining Division ignored all the appellant's arguments since these communications and therefore the decision do not treat them. Consequently, the impugned decision is also not reasoned in that respect.

4.3 The Board can only establish that the Examining Division, when issuing the impugned decision, did not follow the Guidelines for Examination in the European Patent Office, according to which the reasoning must contain in logical sequence those arguments which justify the order. Furthermore, the reasoning should be complete and independently comprehensible and the reasoning should contain the important facts and arguments which speak against the decision (see the Guidelines, Chapter E-X, 5).

The latter means that the decision should address the arguments of the losing party (not in the least to also comply with the right to be heard).

4.4 Additionally, even though claim 1 of the three sets of claims has been amended once by incorporating further features so that the subject-matter of claim 1 of the three different requests has been substantially restricted while the other independent claims have been deleted, the impugned decision refers to all three substantive communications.

This means that it is left up to the Board to construct the applicable reasons by having to "mosaic" the various arguments from the file, or that the Board is left in doubt as to which arguments apply to which claim version. This does **not** meet the requirement of a "reasoned" decision in accordance with Rule 111(2) EPC (see e.g. decisions T 1309/05, points 3 to 3.7 of the reasons; T 1356/05, point 15 of the reasons; and T 1709/06, points 1.2 to 1.2.5 of the reasons; T 1442/09, point 1.4.4 of the reasons; none published in OJ EPO).

In order to be "reasoned" the "decision on the state of the file as it stands" requires that the communications of the Examining Division are well-structured, deal sufficiently with the counterarguments put forward and provide reasoned support for what it concludes.

5. The lack of reasoning in the impugned decision is a substantial procedural violation since it results in the appellant being deprived of any reasoning which it can properly address in appeal and the Board being unable to properly examine the reasons why the Examining Division came to its conclusions of lack of inventive step and lack of clarity.

Remittal to the department of first instance (Article 111(1) EPC)

6. In view of the aforesaid substantial procedural violations the Board considers that it is appropriate to set aside the decision under appeal for this reason alone, in application of Article 11 RPBA, and to remit the case to the department of first instance for

further prosecution in accordance with Article 111(1) EPC.

As the request for oral proceedings was only auxiliary in this respect (see point VII above), the present decision could be taken in written proceedings.

Reimbursement of the appeal fee (Rule 103(1)(a) EPC)

7. For the above reasons it is also equitable to reimburse the appeal fee pursuant to Rule 103(1)(a) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.
3. The appeal fee is to be reimbursed.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders