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**Datasheet for the decision
of 1 March 2012**

Case Number: T 1100/09 - 3.2.06
Application Number: 00982620.7
Publication Number: 1222364
IPC: F01B31/08, F02F3/22, F02F3/00
Language of the proceedings: EN

Title of invention:
DUAL GALLERY PISTON

Applicants:
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Brown, Alan S.
Griffiths, Walter Joseph
Azevedo, Miguel N.

Opponent:
KS Kolbenschmidt GmbH

Relevant legal provisions:
EPC 1973 Art. 84
EPC Art. 123(2), 123(3), 111

Keyword:
Clarity (main request) - no
Exception to the prohibition of reformatio in peius (auxiliary request) - yes
Remittal to the department of first instance - yes

Decisions cited:
G 0001/99



Case Number: T1100/09 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 1 March 2012

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
18 March 2009 concerning maintenance of the
European Patent No. 1222364 in amended form.

Composition of the Board:

Chairman: M. Harrison
Members: G. Kadner
W. Sekretaruk

Summary of Facts and Submissions

- I. The mention of grant of European patent No. 1 222 364, with 12 claims, on the basis of European patent application No. 00982620.7 filed on 6 October 2000 and claiming a US-priority from 8 October 1999, was published on 14 June 2006.
- II. Notice of opposition, in which revocation of the patent on the grounds of Article 100(a) EPC 1973 was requested, was filed against the granted patent.

In its interlocutory decision posted on 18 March 2009, the opposition division found that account being taken of the amendments made by the patent proprietor during the opposition proceedings, the patent and the invention to which it related met the requirements of the EPC. The following prior art was cited:

D1: US-A-4 581 983
D2: US-A-5 309 818
D3: US-A-4 517 930
D4: EP-B-0 189 767
D5: US-A-3 596 571

Amended claim 1 of the patent as found allowable by the opposition division reads as follows (amendments with respect to claim 1 as granted underlined; markers (.) added for indication of the amendments according to the auxiliary request made during the appeal proceedings (see below, section VII.):

"A piston assembly for heavy duty diesel engine applications comprising:

a one piece upper crown part (102, 202) and a one piece

lower crown part (104, 204);

said upper crown part (102, 202) having a lower connecting portion formed with an inner annular rib (107, 207) and an outer annular rib (109, 209) spaced from said inner rib (107, 209),

said inner and outer ribs (107, 207, 109, 209) of said upper crown part (102, 202) extending axially to free ends thereof each presenting a single planar joining surface (108, 110, 208, 210) of said upper crown part ribs (107, 207, 109, 209);

said lower crown part (104, 204) having an upper connecting portion (117, 217) from which a pair of pin boss portions (121, 221) depend having a space (127, 227) between said pin boss portions (121, 221) to receive a connecting rod, said upper connecting portion (117, 217) having an inner annular rib (113, 213) and an outer annular rib (115, 215) spaced from said inner annular rib (113, 213) of said lower crown part (104, 204),

said inner and outer ribs (113, 213, 115, 215) of said lower crown part (104, 204) extending axially to free ends thereof each presenting a single planar joining surface (116, 118, 216, 218) of said lower crown part ribs (113, 213, 115, 215);

said lower crown part (104, 204) having an inner gallery floor (106d, 206d) arranged above said space (127, 227) of said pin boss portions (121, 221) and surrounded by said inner annular rib (113, 213) of said lower crown part (104, 204); and

said inner gallery floor (106d, 206d) including an

opening (106e, 206e) establishing fluid communication between said inner gallery (120, 220) and said space (127, 227) between said pin boss portions (121, 221)

characterized in

that said inner and outer ribs (107, 207, 109, 209) of said upper crown part (102, 202) are joined to said inner and outer ribs (113, 213) of said lower crown part (104, 204), respectively, across their respective single planar joining surfaces (108, 110, 208, 210, 116, 118, 216, 218) by friction weld joints (106b, 106g, 206b, 206g) to define the inner oil gallery (120, 220) and the outer oil gallery (122, 222) within the joined crown parts (102, 202, 104, 204) separated by said inner ribs (107, 113, 207, 213) of said joined crown parts (102, 202, 104, 204),

that said inner rib (113, 213) of said lower crown part (104, 204) is formed with at least one fluid transfer port (123, 223) spaced axially from said joining surface thereof

and extending between said outer oil gallery (122, 222) and said inner oil gallery (120, 220) to establish fluid communication therebetween,

that said fluid transfer port (123, 223) of said inner rib (113, 213) extends upwardly at an angle from said outer gallery (122, 222) to said inner gallery (120, 220),

(Features of granted claim 2 inserted here by way of auxiliary request 20)

that said outer gallery (122, 222) has a floor (124,

224) extending between said inner rib (113, 213) and said outer rib (115, 215) that is spaced axially from said planar joining surfaces (116, 118, 216, 218) of said inner and outer ribs (113, 213, 115, 215) of said lower crown part (104, 204), ~~and~~

that said floor (124, 224) of said outer gallery (122, 222) is spaced below said floor (106d, 206d) of said inner gallery (120, 220). (, and)

(Features of granted claim 5 inserted here by way of auxiliary request 20)".

- III. Notice of appeal was filed against this decision by the appellant (opponent) on 20 May 2009, and the appeal fee was paid on the same day. The grounds of appeal were filed on 27 July 2009.
- IV. Together with its reply to the appeal the respondent filed 5 auxiliary requests.
- V. In a communication accompanying the summons to oral proceedings the Board expressed its preliminary view that the introduction of the word "single" into claim 1 might violate Article 123(2) EPC. Furthermore there was doubt as to whether amended claim 1 was clear in the meaning of Article 84 EPC.
- VI. With letter dated 31 January 2012 the respondent filed further auxiliary requests 6 to 20.
- VII. Oral proceedings were held on 1 March 2012.

The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 1 222 364 be revoked.

The respondent (patentee) requested that the appeal be dismissed or that the patent be maintained on the basis of auxiliary request 20 filed with letter of 31 January 2012.

Claim 1 of auxiliary request 20 was amended with respect to claim 1 of the main request by the deletion of the term "single" throughout and by the insertion of the features of granted claims 2 and 5 in the positions marked above (section II.), the introduced wording of which claims is as follows:

(Claim 2:) "... that said fluid transfer port (123, 223) extends from a location above said floor (124, 224) of said outer gallery (122, 222) to said floor (106d, 206d) of said inner gallery (120, 220) at said upward angle,"

(Claim 5:) "... that said inner ribs (107, 113, 207, 213) of said upper and lower crown parts (102, 202, 104, 204) extend substantially parallel to a central longitudinal axis A of said upper and said lower crown parts (102, 202, 104, 204) adjacent said joining surfaces (116, 118, 216, 218, 108, 110, 208, 210)."

VIII. The arguments of the appellant can be summarized as follows:

Claim 1 of the main request lacked clarity. The term "single" was not disclosed in the description as originally filed but only derivable from Figures 1 and 2, albeit in combination with further features. No other basis existed; in particular Figures 3 and 4 as originally filed were illegible. When assembled, no "single" surfaces could be identified in the "piston

assembly", noting in particular that claim 1 was directed to an assembly and not the parts before welding.

The auxiliary request should not be admitted into the proceedings. It was late-filed contrary to Articles 12 and 13 of the Rules of Procedure of the Boards of Appeal (RPBA). Furthermore it involved a problem of *reformatio in peius*, and there was seemingly no possibility to overcome that problem by further restriction of the claim as required by the decision G 1/99 of the Enlarged Board of Appeal.

- IX. The respondent argued that the skilled person would clearly understand the meaning of "single" planar surfaces. This was also what was shown in the Figures, noting that only a single surface at the end of each rib was described. Since, in friction welding, the surfaces to be welded were usually orthogonal to the rotational axis, the skilled person would recognize that these surfaces lying in one single plane were what was meant; the insertion of the word "single" merely clarified this technical feature, whereby this was in fact merely an over-definition of what would already be understood by a skilled person from the term "surface" in the present context. The existence of a single planar surface before welding could moreover also be identified in the assembled and thus welded piston. Evidence for this was found in Annex A filed with the submission of 31 January 2012, which concerned two components welded by friction, where the joining zone and surfaces were clearly discernible due to a fine grain structure.

The auxiliary request should be admitted into the proceedings. Since the clarification of claim 1 by

insertion of "single" was deemed to be admissible by the opposition division, it was the first time after the Board's communication that a reaction to the objections made there was possible. The deletion of the added feature was in accordance with G 1/99, 3rd alternative, because there was no possibility to restrict the added feature by further originally disclosed features so as to arrive at allowable subject-matter.

Reasons for the Decision

1. The appeal is admissible.
2. *Main request (Article 84 EPC 1973)*
 - 2.1 The respondent was of the opinion that the insertion of "single" into claim 1 made during the opposition proceedings was only a clarification which did not restrict the claimed subject-matter. The Board however finds that the amendment is a restriction; it excludes for example multi-planar surfaces. The amendment is thus not simply a clarification of what the granted claim already states as argued by the respondent. As the amendment is also not simply a result of combining granted claims, the requirements of Article 84 EPC 1973 need to be fulfilled by the amendment.
 - 2.2 The features in the precharacterizing portion of claim 1 define two crown parts of a piston assembly to be joined by friction welding (i.e. to achieve the welded state defined in the characterizing portion). However, the claim is directed to a "piston assembly" (i.e. an assembly formed by assembling these crown parts) in which the friction welded joining

surfaces are no longer identifiable because the surfaces have melted and are welded to one another. Consequently the features of the precharacterizing portion in question are no longer present in the subject-matter having the further features of the characterizing portion. This leads to a lack of clarity in the meaning of Article 84 EPC 1973 since it is not determinable in which configuration the respective joining surfaces are related to one another in the piston assembly according to claim 1. Specifically in the present case, it is no longer possible to identify whether a single surface was used on each rib before welding. Although the respondent argued that a single surface on each rib could still be identified in the welded assembly, as allegedly demonstrated by Annex A, the Board is unconvinced by this argument, since the joining surfaces where friction welding occurred in Annex A are highly deformed (as shown for example at the outer portions thereof) such that identification of a single surface on each of the contact areas which were ultimately joined cannot be made.

2.3 For this reason the main request cannot be allowed.

3. *Auxiliary request (exception to the prohibition of reformatio in peius)*

3.1 In its decision G 1/99 the Enlarged Board of Appeal held that in principle, an amended claim, which would put the opponent and sole appellant in a worse situation than if it had not appealed, must be rejected. However, an exception to this principle may be made in order to meet an objection put forward by the opponent/appellant or the Board during the appeal proceedings, in circumstances where the patent as maintained in amended form would otherwise have to be

revoked as a direct consequence of an inadmissible amendment held allowable by the Opposition Division in its interlocutory decision.

In such circumstances, in order to overcome the deficiency, the patent proprietor/respondent may be allowed to file requests, as follows:

- in the first place, for an amendment introducing one or more originally disclosed features which limit the scope of the patent as maintained;
- if such a limitation is not possible, for an amendment introducing one or more originally disclosed features which extend the scope of the patent as maintained, but within the limits of Article 123(3) EPC;
- finally, if such amendments are not possible, for deletion of the inadmissible amendment, but within the limits of Article 123(3) EPC.

3.2 In the present case neither the Board nor the parties to the proceedings saw a possibility of applying one of the first or second alternative solutions established by the Enlarged Board. The newly introduced term "single" cannot be restricted by another expression since it has already the narrowest specific meaning in defining the surfaces. There is no other expression in the patent which would be suitable to restrict "single" in another way because it is already the highest degree of definition compared to the possibilities of "a" or "one". Therefore, according to established case law, the respondent may be allowed to delete the inadmissible amendment made during the opposition proceedings. Since the deletion also does not extend the scope of protection conferred by claim 1 as granted (as this defined merely "a planar joining surface"),

deletion of the term "single" does not contravene Article 123(3) EPC.

3.3 *Article 84 EPC 1973, 123(2) EPC*

Claim 1 of the auxiliary request is limited by the features of granted claims 2 and 5. The Board does not see any lack of clarity arising by the addition of the features of those claims. According to Rule 80 EPC the proprietor may make amendments provided that the amendments are occasioned by a ground for opposition under Article 100 EPC, even if that ground has not been invoked by the opponent. *Prima facie* the amendments have been made in respect of the prior art on file, in particular E4. The amendments have also not been objected to by the appellant, either under Article 84 EPC 1973 or under Article 123(2) EPC. Therefore the auxiliary request meets the requirements for admissibility into the proceedings.

4. *Remittal to the department of first instance*

4.1 According to Article 111 EPC the Board of Appeal may either exercise any power within the competence of the department which was responsible for the decision appealed or remit the case to that department for further prosecution.

4.2 The basis of the opposition division's decision has changed to a significant extent, in that instead of claim 1 as held allowable a new claim 1 is on file in which not only has a restricting feature been deleted but further features from granted claims 2 and 5 have been introduced. The subject-matter of that claim 1 was not yet subject of the opposition proceedings. For this reason, and also to give the parties the opportunity to

pursue their case in two instances the Board uses its discretion and remits the case to the opposition division. It is also noted that neither party raised any objection to the remittal of the case.

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 for continuation of the opposition proceedings.

The Registrar:

The Chairman:



M. Patin

M. Harrison

Decision electronically authenticated