Case Number: T 1623/06 - 3.2.06
Application Number: 01943244.2
Publication Number: 1328375
IPC: B23Q 1/54
Language of the proceedings: EN
Title of invention:
Double-rotatable spindle head for machine tools
Patentee:
HPT SINERGY S.R.L.
Opponent:
Cytex Zylindertechnik GmbH
Headword:
-
Relevant legal provisions:
EPC Art. 123(2)
RPBA Art. 13(1)
Keyword:
"Unallowable isolation of feature from an originally disclosed combination (main request)"
"Exercise of the Board's discretion not to admit late filed requests (first and second auxiliary requests)"
Decisions cited:
T 0025/03, T 1067/97, T 0714/00
Catchword:
-
Case Number: T 1623/06 - 3.2.06

DECISION
of the Technical Board of Appeal 3.2.06
of 21 February 2008

Appellant: Cytec Zylindertechnik GmbH
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Composition of the Board:
Chairman: P. Alting Van Geusau
Members: G. Pricolo
K. Garnett
Summary of Facts and Submissions

I. This appeal is from the decision of the opposition division posted on 13 October 2006 maintaining European patent No. 1 328 375 in amended form in accordance with the patent proprietor's main request filed on 21 August 2006.

II. Independent claim 1 according to this main request reads as follows:

"1. A double-rotatable spindle head of non-perpendicular axis type for machine tools, with a first half-head (2) pivoted to the machine structure (4) about a first axis (10) and, for supporting the tool spindle (8), a second half-head (6) coupled to the first half-head (2) on a flat surface (20) and pivoted to it about a second axis (22) perpendicular to said flat surface (20), characterised by comprising a first direct motor (16, 18) for rotating said first half-head (2) with respect to said machine structure (4) and a second direct motor (28, 30) for rotating said second half-head (6) with respect to said first half-head (2), said second direct motor comprising a stator (28), which is rigid with said first half-head (2) and a rotor (30), which is rigid with said second half-head (6)."

III. In coming to its decision the opposition division held that "the amended claim is admissible in respect of Article 123(2) EPC since its subject-matter does not extend beyond the content of the application as filed. A basis for the wording of the added features "said second direct motor comprising a stator, which is rigid
with said first half-head and a rotor, which is rigid with said second half-head" can be found in the application as filed, description page 3, lines 15 to 17" (section 1 of the decision under appeal). The opposition division further held that the claimed subject-matter was novel and inventive over the available prior art.

IV. The appellant (opponent) lodged an appeal against this decision, received at the EPO on 23 October 2006, and simultaneously paid the appeal fee. The grounds of appeal were received on 13 February 2007.

V. In an annex to the summons for oral proceedings pursuant to Article 11(1) Rules of Procedure of the boards of appeal, the Board expressed the following preliminary opinion:

"Claim 1 is amended over claim 1 as granted by the inclusion of the feature: "said second direct motor comprising a stator, which is rigid with said first half-head and a rotor, which is rigid with said second half-head". This feature is disclosed in the description of the application as filed only in combination with other features, in particular the feature that the first direct motor comprises a stator which is rigid with a connection element 4 and a rotor which is rigid with the first half-head 2 (see page 3 of the application as filed). It would appear that there is no basis in the application as filed to isolate the above-mentioned feature from the combination in which it is disclosed. Accordingly, it would appear that the amendment of claim 1 does not meet the requirements of Article 123(2) EPC."
The Board further stated that the claimed subject-matter did not appear to involve an inventive step.

VI. Oral proceedings, at the end of which the decision of the Board was announced, took place on 21 February 2008.

The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed, alternatively that the patent be maintained on the basis of the claims in accordance with the first or second auxiliary requests filed during the oral proceedings.

VII. Compared to claim 1 according to the main request, claim 1 according to the first auxiliary request additionally defines the following feature:

"said first direct motor comprising a stator (16) which is rigid with said machine structure (4) and a rotor (18) which is rigid with said first half-head (2)."

Claim 1 according to the second auxiliary request reads as follows:

"M1) A double-rotatable spindle head of non-perpendicular axis type for machine tools;
M2) The spindle head comprises a first half-head (2) pivoted to the machine structure (4) about a first axis (10),
M3) The spindle head comprises a second half-head (6) coupled to the first half-head (2) on a flat surface (20),
M4) The second half-head (6) is pivoted to the first half-head (2) about the second axis (22) perpendicular to said flat surface (20) for supporting the tool spindle (8),
M5) A first direct motor (16, 18) is provided for rotating said first half-head (2) with respect to said machine (4),
M6) A second direct motor (28, 30) is provided for rotating said second half-head (6) with respect to said first half-head (2),
M7) Said second direct motor comprises a stator (28), which is rigidly fixed in said first half-head (2) and a rotor (30) which is rigid with said second half-head (6) supporting said tool spindle (8)
M8) Said first direct motor comprises a stator (16) which is rigid within said machine structure (4) and a rotor (18) which is rigid with said first half-head (2)
M9) The double rotatable head is fixed to the machine structure by a connection element
M10) The rotation of the first half head is guided by bearings (12) applied to the machine structure (4) and engaging in a circumferential groove (14) provided in the casing of the first half head (2)
M11) The rotation of the second half head is guided by bearings (24) applied to the said first half-head (2) and engaging in a circumferential groove (26) provided in the casing of the second half head (6)
M12) said flat surface (20) forms with said first axis (10) an angle less than 45° and preferably between 35° and 40°."
VIII. The appellant agreed with the preliminary opinion of the Board set out in the annex to the summons for oral proceedings (see point V above), according to which there was no basis in the application as filed to isolate, from the single embodiment disclosed in the description and drawings of the application as filed, the feature that the second direct motor comprised a stator, which was rigid with the first half-head and a rotor, which was rigid with the second half-head. This feature was in close functional relationship with other features of the embodiment which were not included in claim 1. The feature in question defined a specific arrangement of one direct motor which was clearly functionally linked to the specific arrangement of the other direct motor described in the application as filed. Claim 1 according to the first auxiliary request filed during oral proceedings was amended to include the latter feature but failed to mention other features belonging to the set of functionally interlinked features originally disclosed in combination, such as the presence of bearings, the angle between the half-heads, and the feature that the second direct motor was inside the housing of the first half-head. Claim 1 of the second auxiliary request, which was filed at a very late stage of the oral proceedings, also did not include all the functionally interlinked features originally disclosed in combination, in particular the feature that the rotor of each motor was within the respective stator.
IX. The respondent's replies to these arguments can be summarized as follows:

The feature added to claim 1 according to the main request was literally disclosed in the application as filed. Even though it was disclosed in the single embodiment of the invention in combination with other features, it was clear that the other features were not essential to the invention. Therefore, the amendment made in accordance to the main request did not constitute an infringement of Article 123(2) EPC. The same applied to the amendment made in accordance with the first auxiliary request, filed in reply to the objection raised by the Board in the annex to the summons to oral proceedings. Claim 1 according to this request included a further additional feature which was also literally disclosed in the application as filed. Claim 1 according to the second auxiliary request was amended to include the features whose absence in claim 1 was objected to by the appellant during the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. Main request

2.1 Claim 1 according to the main request is amended over claim 1 as granted by the inclusion of the feature: "said second direct motor comprising a stator, which is rigid with said first half-head and a rotor, which is rigid with said second half-head". This feature is
clearly taken from the description of the only embodiment of a double-rotatable spindle head disclosed in the application as filed. The wording of the added feature is found on page 3, lines 15 to 18 of the application as filed, relating to the description of the preferred embodiment of the invention (see page 2, lines 12 to 21 of the application as filed). In this single embodiment of the invention, the feature in question is disclosed in combination with other features. Accordingly, the amendment made consists in adding one isolated feature extracted from an originally disclosed combination.

2.2 In accordance with the established case law of the boards of appeal (see e.g. the Case Law Book, 5th edition 2006, III.A.1.1), extracting an isolated feature from an originally disclosed combination and using it to delimit claimed subject-matter can only be allowed, having regard to Article 123(2), EPC if there is no clearly recognisable functional or structural relationship among the features of the combination (see for instance T 25/03, point 3.3; see also T 1067/97; T 714/00).

In the present case the feature added relates to the arrangement of rotor and stator of the second direct motor and is disclosed in combination with the analogous arrangement of rotor and stator of the first direct motor. As a matter of fact, the passage on page 3, lines 4 to 6, of the application as filed discloses that the stator (16) of the first direct motor is rigid with a connection element (4) for connecting the first half-head (2) to the machine tool structure and that the rotor (18) of the first direct
motor is rigid with the first half-head (2). It cannot be inferred from the disclosure of the application as filed that there is no functional or structural relationship between this specific arrangement of the first direct drive motor and the specific arrangement of the second direct drive motor in accordance with the added feature. In fact, the skilled person would only derive from the description of the single embodiment that if the stator (28) of the second direct motor is rigid with the first half-head (2), then the rotor (16) of the first direct motor must be rigid with the first half-head (2) and, as a consequence, its stator (16) must be rigid with the connection element (4).

2.3 The respondent submitted that the feature relating to the arrangement of the second direct drive was literally disclosed in the application as filed, and that it was clear for the skilled person that only that feature was essential to the invention, in particular having regard to the prior art, and that the feature relating to the arrangement of the first direct drive was irrelevant.

The fact that the feature relating to the arrangement of the second direct drive was disclosed per se in the application as filed was never in dispute in these proceedings. The relevant question, however, is whether there is a basis in the application as filed, taking due account of the skilled person's general knowledge, to consider that the feature relating to the arrangement of the second direct motor is functionally and structurally independent from the other features of the disclosed combination.
The Board notes that when considering the admissibility of the amended claim in respect of Article 123(2) EPC also the Opposition Division incorrectly considered only the isolated disclosure of the wording of the added feature as such (see point III above). In view of this deficiency in the decision under appeal the Board raised the matter in the communication annexed to the summons to oral proceedings and again during the oral proceedings.

As regards the argument that it was clear that only the added feature was essential to the invention, the Board notes that the respondent simply relied on his allegation but failed to show a basis in the application as filed for supporting his view. In fact, there is no basis in the application as filed from which it can be inferred either that the added feature relating to the arrangement of the second direct drive is essential, or that the above-mentioned feature relating to the arrangement of the first direct motor is merely optional and therefore not essential to the invention (and as such irrelevant).

Moreover, it is of no pertinence to the present context whether the added feature as such would be essential to the inventive character of the claimed subject-matter when compared to the prior art, since for the purposes of Article 123(2) EPC it is only the content of the application as filed as a whole which must be taken into account whereas prior art becomes relevant for deciding novelty and inventive step.
2.4 Since the above-mentioned feature added to claim 1 is functionally and structurally related to the feature concerning the arrangement of rotor and stator of the first direct motor, the amendment made consisting of the addition of an isolated feature extracted from the set of features originally disclosed in combination is not allowable under Article 123(2) EPC because it leads to a set of features which is not disclosed as such in the application as filed.

3. First auxiliary request

3.1 According to Article 13(1) of the Rules of Procedure of the Boards of Appeal (OJ 11/2007), "any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject matter submitted, the current state of the proceedings and the need for procedural economy."

3.2 The first auxiliary request was filed during the oral proceedings, after the oral proceedings had been opened and the discussion had started, and therefore constitutes an amendment to the respondent's case which may be admitted at the Board's discretion pursuant to Article 13(1) RPBA.

3.3 Even though claim 1 is amended by including a feature relating to the arrangement of the first direct motor (see point VII above), it does not mention the feature which is clearly and unambiguously disclosed in Figs. 2 and 3, namely that the second direct motor is provided within the first half-head (2). This feature is
structurally and functionally related to the claimed arrangement of the rotor and stator of the second direct drive: from Figs. 2 and 4 it can be inferred that the stator (28) can be made rigid with the first half-head and the rotor rigid with the second half-head because both are provided within the first half-head. Accordingly, the amendment made to claim 1 is not clearly such as to remove the source of non-compliance with Article 123(2) EPC.

3.4 The respondent submitted that the first auxiliary request constituted a reaction to the provisional opinion of the Board as set out in the annex to the summons to oral proceedings, where objection had only been taken to the feature that the first direct motor comprised a stator which was rigid with a connection element and a rotor which was rigid with the first half-head was not present in claim 1 according to the main request.

However, there is no statement in the annex to the summons to oral proceedings that only the feature that the first direct motor comprised a stator which was rigid with a connection element and a rotor which was rigid with the first half-head was missing in claim 1. Indeed reference was made to the fact that the feature added to claim 1 according to the main request was disclosed in combination with other features (plural), in particular the latter feature (see point V above).

3.5 The Board also observes that the summons to oral proceedings was issued on 25 October 2007 and therefore any reaction to the Board's preliminary opinion could and indeed should have been filed well in advance of
the oral proceedings, which was held on 21 February 2008. In this respect, paragraph 3 of the communication made it clear that any amended documents or requests in response to the communication should have been at the disposal of the Board in due time before the envisaged date of the oral proceedings. Particular attention was also drawn to what is now Article 13 of the Rules of Procedure of the boards of appeal. However, the respondent waited until the discussion during oral proceedings had already begun before filing its reaction.

3.6 Under these circumstances, the Board exercises its discretion not to admit the first auxiliary request, being late filed and the amendment not clearly being such as to remove the source of non-compliance with Article 123(2) EPC.

4. Second auxiliary request

4.1 The second auxiliary request was filed during the oral proceedings, after the main and first auxiliary requests had been discussed, and following an interruption of the oral proceedings which had been requested by the respondent for preparing a further amended claim 1.

4.2 During the discussion of the first auxiliary request, and thus before this interruption, it had been pointed out by the Board that also the feature according to which the rotor arrangements of the direct motors were located within the respective stators, which was clearly and unambiguously derivable from the single embodiment of the invention described in relation to
Figs. 2 and 4 of the application as filed, was functionally and structurally linked with the features added to claim 1 as granted, i.e. features M7 and M8 (see point VII above). This point was raised again by the appellant during the discussion on the admissibility of the second auxiliary request. The respondent replied by stating merely that the feature according to which the rotors of the direct drive motors were located within the respective stators was not essential for the performance of the invention.

4.3 In the absence of any argument from the respondent in support of the fact that the feature that the rotors of the direct drive motors are located within the respective stators is not functionally or structurally related to the arrangement of rotor and stator of the first and second direct drive motors as recited by claim 1, the Board sees no reason not to accept the appellant's view. In fact, claim 1 leaves open how the relative arrangement of stator and rotor of the direct drive motors is made (in particular in respect of the type of direct motor, whether being of a flat and thin type or of the cylindrical type with either an internal or external rotor) whilst the construction shown in Figs. 2 and 4 clearly requires, for a proper functioning, that cylindrical rotors are arranged within the respective cylindrical stators.

4.4 Therefore, in the exercise of the Board's discretion pursuant to Article 13(1) RPBA, since the amendment made to claim 1 is not clearly such as to remove the source of non-compliance with Article 123(2) EPC, the second auxiliary request is also not admitted into the proceedings.
5. Since the only admissible request (main request) of the respondent does not comply with the requirements of Article 123(2) EPC, the patent cannot be maintained as amended and must therefore 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:

M. Patin P. Alting van Geusau