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Datasheet for the decision of 5 September 2013

Case Number: T 2366/10 - 3.2.07

Application Number: 01500108.4

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Language of the proceedings: EN

Title of invention:
Grinding machine with direct drive rotary wheelhead

Patent Proprietor:
Danobat, S. Coop

Opponent:
EMAG Holding GrnbH

Headword:
-

Relevant legal provisions:
EPC Art. 52, 54(3), 56
RPBA Art. 13(1)

Keyword:
"Document without any date information: disregarded"
"Late-filed submissions: not admitted"
"Novelty: yes"
"Inventive step: yes"

Decisions cited:
-

Catchword:
-

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Case Number: T 2366/10 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 5 September 2013

Appellant: (Opponent)	EMAG Holding GmbH Austrasse 24 DE-73084 Salach (DE)
Representative:	Mischung, Ralf Patentanwälte Eder & Schieschke Elisabethstrasse 34 DE-80796 München (DE)
Respondent: (Patent Proprietor)	Danobat, S. Coop Poligono Arriaga, 21 ES-20870 Elgoibar (Guipuzcoa) (ES)
Representative:	Evens, Paul Jonathan Maguire Boss 24 East Street St. Ives Cambridgeshire PE27 5PJ (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 13 October 2010 rejecting the opposition filed against European patent No. 1155780 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman: H. Meinders
Members: K. Poalas
I. Beckedorf

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting its opposition filed against European patent No. 1 155 780.

II. Opposition had been filed against the patent as a whole, based on Article 100(a) EPC (lack of inventive step).

The Opposition Division found that the above-mentioned ground of opposition under Article 100(a) EPC does not prejudice the maintenance of the patent as granted.

III. The following documents are mentioned in the present decision:

(mentioned in the decision of the opposition division)
D3: US 5 584 621 A
D5: DE 30 19 666 C
D7: EP 1 046 461 A (Article 54(3) EPC state of the art);

(filed together with the statement setting out the grounds of appeal)
D11: WO 92/00832 A
D12: DE 41 22 711 C and
D13: copies of NSK datasheet "Megatorque Motor", undated;

(filed with letter dated 29. April 2013)
D14: copies of "User's Manual - Megatorque® Motor System", Nippon Seinko K.K.

IV. With its communication dated 19 February 2013 the Board summoned the parties to oral proceedings scheduled for 28 May 2013. In the annex to said summons the Board expressed its provisional opinion that it could not follow the appellant's arguments concerning lack of novelty and lack of inventive step of the subject-matter of claim 1.

V. With its letter dated 29 April 2013 the appellant filed new document D14 and new submissions concerning the combination of the teachings of D11 and D12 or D11 and D14.

With the same letter the appellant informed the Board that it will not attend the scheduled oral proceedings.

VI. The Board then cancelled the oral proceedings and could decide the case in written proceedings.

VII. The requests of the parties are the following:

The appellant requests that the decision under appeal be set aside and that European patent No. 1 155 780 be revoked.

The respondent (patent proprietor) requests that the appeal be dismissed.

VIII. The appellant argued essentially as follows:

Interpretation of the term "wheelhead"

There is no basis in the patent in suit supporting the interpretation of the term "wheelhead" as being a

support for the grinding wheel of a grinding machine.

Claim 1: Novelty - Articles 52 and 54(3) EPC

The expressions "*oder dgl.*" and "*sämtliche weiteren Bearbeitungsarten*" used in column 4, line 51 to column 5, line 4 of D7 define for the person skilled in the art that all other types of machining, i.e. including grinding, can be carried out on workpieces clamped to the turning spindle 5 of the machine known from D7. The machine known from D7 is thus novelty destroying for the subject-matter of claim 1.

Claim 1: Inventive step — Article 56 EPC

Combination of the teaching of D5 with the technical knowledge of the skilled person or combination of the teachings of D5 and D3

Starting from the machine known from D5 and intending to provide a constructional simplification of said machine the skilled person would remove the transmission gear from said machine and would thus arrive at the machine according to claim 1 without exercising an inventive activity.

D3 describes a gearless, direct drive, multiple axes rotary head for a machine tool. The implementation of such a direct drive to the machine known from D5 would lead the skilled person to the machine according to claim 1 without the exercise of an inventive activity.

Combination of the teachings of D12 and D5

The machine according to claim 1 differs from the one known from D12 in that the machine is a grinding machine and the torque motor is a high torque motor. By simple modification of the machine known from D12 in the light of the teaching of D5, i.e. so that it can be used as "wheelhead" for a grinding machine, the skilled person would arrive at the machine according to claim 1 without exercising an inventive activity.

Combination of the teachings of D11 and D13

D11 mentions on page 16, line 18: NSK BSO6OSFNOO1 servo motors. The structural details of such a motor are known from D13.

The combination of the teachings of D11 and D13 renders thus the subject-matter of claim 1 not inventive.

Combination of the teachings of D11 and D12 or D11 and D14

Since D11 discloses both the use of high torque motors and grinding tools the combination of the teachings of D11 and D12 renders the subject-matter of claim 1 obvious.

The late filing of D14 is the appellant's reaction to the Board's finding that D13 does not contain any data information. The sentence "*Copyright 1989 by Nippon Seiko K.K., Tokyo, Japan*" on page 3 of D14 testifies the public availability of D14 since 1989. D14 discloses different NSK-servo motors.

The combination of the teachings of D11 and D14 renders the subject-matter of claim 1 obvious.

IX. The respondent argued essentially as follows:

Interpretation of the term "wheelhead"

Due to the information disclosed in paragraphs [0001] and [0002] of the patent in suit and also due to the first characterising feature of claim 1 that the claimed machine is a grinding machine the patent in suit clearly defines that the term "whealhead" designates a machine head that supports a grinding wheel.

Claim 1: Novelty - Articles 52 and 54(3) EPC

D7 contains no disclosure of the first characterising feature of claim 1 that "the machine is a **grinding machine**".
The terms "*oder dgl.*" and "*sämtliche weiteren Bearbeitungsarten*" in column 4, line 51 to column 5, line 4 of D7 are generic disclosures and as such do not anticipate the specific feature of a "**grinding machine**".

Claim 1: Inventive step — Article 56 EPC

Combination of the teaching of D5 with the technical knowledge of the skilled person or combination of the teachings of D5 and D3

D5 neither shows a grinding machine nor a "stator attached to the wheelhead".
Furthermore, D5 contains no suggestion of the feature

of independent claim 1 concerning the motor parts attached both to a stationary inner support shaft and to a rotatable outer support shaft.

Although D3 discloses a direct drive head for a machine tool there is no incentive for the skilled person to use such an arrangement in the lathe turret of D5 given that the planetary drive of D5 is particularly chosen for its ability to set precisely the position of the turret.

Moreover, the inner "rotor" member 70 shown in figure 3 of D3 is attached to the rotatable sleeve 36 and the outer "stator" member 66 is attached to the stationary housing 48, 50 of a support arm 32, column 4, lines 11-39. Applying this arrangement to the machine of D5 the resulting apparatus would neither have the inner rotor member attached to the stationary support shaft nor the outer stator member attached to the wheelhead, thus not lead to the corresponding characterising features of claim 1.

Combination of the teachings of D12 and D5

D12 does not disclose in particular the feature whereby the wheelhead is mounted on the support shaft. The indexing table 25 is mounted on the outer cylinder 11B via bearing 15. Neither table 25 nor member 14 is mounted on the inner cylinder 1lA.

D5 neither discloses nor suggests a rotatable wheelhead for a grinding machine.

It follows that the subject-matter of claim 1 would not result in an obvious manner from a combination of the teachings of documents D12 and D5.

Combination of the teachings of D11 and D13

D13 without any data concerning its public availability does not belong to the state of the art according to Article 54(2) EPC. Moreover, D13 does not contain any structural details of the particular NSK BSO6OSFNOO1 motor mentioned on page 16, line 18 of D11.

Reasons for the decision

1. It is undisputable that in the patent in suit the term "stator 2b" denominates the rotating part of the motor 2 defining thereby a "**rotor**" in the conventional definition of a rotating part of a motor, whereby the term "rotor 2a" denominates the non-rotating part of the motor 2 defining thereby a "**stator**" in the conventional definition of a non-rotating part of a motor, see paragraph [0017] of the patent specification. In order to avoid any confusion with respect to the terminology used in the present decision the Board will use the expressions "**rotor**" and "**stator**" in place of the respective expressions "stator 2b" and the "rotor 2a" used in claims. Under these circumstances claim 1 of the patent as granted reads for the Board as follows:

"A machine comprising:
a rotatable wheelhead (1) mounted on a support shaft (8);
a high torque motor (2) for rotating the wheelhead (1)

relative to the support shaft (8); and
an encoder (3) for detecting the angular position of the wheelhead; characterized in that:
the machine is a grinding machine;
the motor (2) comprises a **stator** attached to the support shaft (8) and a **rotor** attached to the wheelhead (1), with the **rotor** surrounding the **stator**; and
the motor (2) and the encoder (3) are housed inside the wheelhead (1)".

2. *Interpretation of the term "wheelhead" used in claim 1*

2.1 In the annex to the summons to oral proceedings the Board stated under point 2 that it understands the term "wheelhead" "*in the light of the paragraph [0002] of the description as defining a machine head that supports a grinding wheel*".

2.2 This interpretation of the above-mentioned term by the Board has neither been commented on nor contested any longer by the appellant in its responding letter dated 29 April 2013.

2.3 Under these circumstances, the Board having once again taken into consideration all the relevant aspects concerning said issue sees no reason to change its above-mentioned interpretation of the term "wheelhead".

3. *Claim 1: Novelty — Articles 52 and 54(3) EPC*

3.1 In the annex to the summons to oral proceedings the Board expressed under point 3 its provisional opinion that "*the generic terms "oder dgl." and "sämtliche weiteren Bearbeitungsarten" in column 4, line 51 to*

column 5, line 4 of D7 cannot anticipate the specific feature "grinding machine" claimed in claim 1".

3.2 This consideration has neither been commented on nor contested any longer by the appellant in its responding letter dated 29 April 2013.

3.2.1 Under these circumstances, the Board having once again taken into consideration all the relevant aspects concerning said issue sees no reason to change its above-mentioned opinion and considers that the machine known from D7 cannot anticipate the machine claimed in claim 1 and thus, that the subject-matter of claim 1 is novel.

4. *Claim 1: Inventive step — Article 56 EPC*

4.1 *Combination of the teaching of D5 with the technical knowledge of the skilled person or combination of the teachings of D5 and D3*

4.1.1 In the annex to the summons to oral proceedings the Board stated under point 4.3 that it "*cannot see why the skilled person would completely redesign the wheelhead of D5 and discard elements which are essential for that wheelhead, such as the gear wheel 17, the drive wheel 12, the coupling teeth 9, the coupling ring 8. Also the teaching of D3 would not only lead to a complete redesign, but would also require inversion of the system of D3 when applied to a machine according to D5. Further, there is no mention, neither in D5 nor in D3 of a grinding machine. The Board tends therefore to follow on this issue the respondent's arguments*

presented under point 2 of its letter dated 22 June 2011".

4.1.2 The above-mentioned statement of the Board has neither been commented on nor contested by the appellant in its responding letter dated 29 April 2013.

4.1.3 Under these circumstances, the Board having once again taken into consideration all the relevant aspects concerning said issue sees again no reason to depart from its above-mentioned statement and considers thus that neither the combination of the teaching of D5 with the technical knowledge of the skilled person nor the combination of the teachings of D5 and D3 results in an obvious manner in the subject-matter of claim 1.

4.2 *Combination of the teachings of D12 and D5*

4.2.1 In the annex to the summons to oral proceedings the Board expressed under point 4.4 its provisional opinion that "*the indexing table 25 in D12 is mounted on the non-rotating housing 11 via bearing 15 and that neither said table 25 nor the member 14 is mounted on shaft 11a. It seems therefore that D12 does not disclose "a rotatable wheelhead mounted on a support shaft" and that it also does not disclose a grinding machine or a high torque motor. It follows thus that, even if the skilled person were to use the arrangement of D12 to support the grinding wheel of a grinding machine, he/she would not arrive at the subject-matter of independent claim 1.*

Since D12 does not disclose a wheelhead mounted on a support shaft and D5 does not disclose nor suggest a

rotatable wheelhead for a grinding machine it seems that the subject-matter of claim 1 cannot even result in an obvious manner from a combination of the teachings of documents D12 and D5, let alone result as obvious from a proper application of the problem-solution approach".

4.2.2 In its letter dated 29 April 2013 the appellant argues against this, in that in figure 1 of D12 the housing 11 and the shaft 11A are fixedly connected to each other via the connecting part 26 and that it makes technically no difference whether the indexing table 25 together with the rotating member 14 are positioned on the housing 11 or on the shaft 11A. Also in the patent in suit the wheelhead 1 is only indirectly connected via the housing 9 to the support shaft 8.

The Board cannot follow the above-mentioned appellant's arguments for the following reasons.

4.2.3 The motor according to claim 1 differs from the one depicted in figure 1 of D12 in that
a) the torque motor is a high torque motor;
b) the machine is a grinding machine;
c) the rotatable wheelhead (indexing table 25) is not mounted on the support shaft (11A) having the stator attached thereto; and
d) the motor and the encoder are housed inside the wheelhead.

4.2.4 As far as it concerns the above-mentioned differentiating feature c) the Board notes that according to figure 1 of D12 both the inner cylinder 11A and the outer cylinder 11B are fixedly connected to

the base element 26. On the other hand, the outer cylinder 11B supports via the bearings 15 the indexing table 25 and the inner cylinder 11A supports the stator 12. The interconnection between the outer cylinder 11B and the inner cylinder 11A via the base element 26 cannot be considered as enabling the inner cylinder 11A to "support", not even indirectly, the indexing table 25, as argued by the appellant.

4.2.5 As far as it concerns the above-mentioned differentiating feature d) the Board notes that since the indexing table 25 depicted in figure 1 of D12 has a flat configuration the motor and the encoder are obviously not housed inside said table.

4.2.6 The appellant's argument that a similar situation exists in the configuration of the machine depicted in figure 1 of the patent in suit is not correct, since the wheelhead 1 depicted therein is fixed on the outer shoulders of the housing 9, said last being connected to the support shaft 8 via the bearings 7a, 7b. This is a totally different structural configuration than the one shown in figure 1 of D12.

4.2.7 Given the fact that the appellant's arguments concerning the disclosure of D12 cannot be followed by the Board, see points 4.2.3 to 4.2.6 above, the Board sees again no reason to depart from its preliminary opinion as expressed in the annex to the summons to oral proceedings that the combination of the teachings of D12 and D5 does not render the subject-matter of claim 1 in an obvious manner.

4.3 *Consideration of D13 in the assessment of inventive step*

4.3.1 In the annex to the summons to oral proceedings the Board stated under point 4.5 that "*[s]ince D13 ("Megatorque Motor") does not contain any date information and furthermore it also does not contain any details on the particular NSK BSO6OSFNOO1 motor mentioned on page 16, line 15 of Dl1 the Board does not intend to take it into consideration when assessing inventive step*".

4.3.2 In its letter dated 29 April 2013 the appellant recognises the missing of a publishing date for D13. No comments or arguments concerning the Board's intention not to take into consideration D13 when assessing inventive step were presented in that letter.

4.3.3 Under these circumstances, the Board having once again taken into consideration all the relevant aspects concerning said issue sees no reason to depart from its above-mentioned intention.

D13 is not taken into consideration in the assessment of inventive step.

4.4 *Admissibility of the appellant's submissions filed with letter dated 29 April 2013 concerning the combination of the teachings of D11 and D12 or D11 and D14*

4.4.1 According to Article 13(1) RPBA 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.

4.4.2 In the present case the Board stated under points 4.1 and 4.2 of its annex to the summons to oral proceedings that

"*[t]he examination of inventive step is performed since decades by the boards of appeal in application of the "problem-solution approach" as established by consistent case-law. The appellant has not applied this approach.*

In this approach is required to establish the closest prior art, the difference(s) of the claimed invention over this closest prior art and the effect of this (these) difference(s). From the effect follows the objective problem to be solved."

and further under point 4.5 of the same annex that

"*[t]he appellant does not define in its grounds of appeal which parts of the machine known from D11 correspond to the "rotatable wheelhead" and to the "support shaft" according to claim 1, in a proper establishment of D11 as closest prior art*".

4.4.3 In the second paragraph of its letter dated 29 April 2011 the appellant states:

"*Die* ***Anmelderin*** *[sic] möchte darauf hinweisen, dass sie entgegen den Ausführungen im Ladungsbescheid die Frage der erfinderischen Tätigkeit bereits mit der*

Einspruchsfrist *nach der Problem-Solution-Approach behandelt wurde*" (emphasis added by the Board).

4.4.4 The Board notes that what is presented during the opposition proceedings is not automatically part of the appeal proceedings. Since the documents in question did not form part of the opposition proceedings they can hardly have been the subject of a problem-solution approach at that stage.

4.5 The Board notes further that in the appellant's argumentation offered in its letter dated 29 April 2013 in this respect, again no "problem solution-approach" is presented.

4.6 It is not the task of the Board to determine, for the appellant, what are the differentiating feature(s) of the claimed invention over the closest prior art (D11), the effect of this (these) differentiating feature(s), the objective problem to be solved and the relevant teachings in D12 or D14 concerning the provision of these differentiating features in order to solve that problem.

4.6.1 These submissions of the appellant are therefore not conducive to procedural economy.

4.6.2 Accordingly, the Board exercises its discretion under Article 13(1) RPBA and does not admit these submissions into the proceedings.

4.7 As a result, the objections raised by the appellant cannot lead to question inventive step of the subject-matter of claim 1.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall H. Meinders