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**Datasheet for the decision
of 25 August 2015**

Case Number: T 0622/11 - 3.2.07
Application Number: 04004127.9
Publication Number: 1477275
IPC: B24B7/06, B24B19/24, B24B27/00,
B24B41/047, B24D13/14
Language of the proceedings: EN

Title of invention:

Abrading machine with abrading discs, which are moved in a reciprocatory movement transverse to the item

Patent Proprietor:

Slipcon Holding International ApS

Opponent:

Karl Heesemann Maschinenfabrik GmbH & Co.KG

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0622/11 - 3.2.07

**D E C I S I O N
of Technical Board of Appeal 3.2.07
of 25 August 2015**

Appellant: Karl Heesemann Maschinenfabrik GmbH & Co.KG
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 10 February
2011 rejecting the opposition filed against
European patent No. 1477275 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman H. Meinders
Members: V. Bevilacqua
C. Brandt

Summary of Facts and Submissions

- I. The Appellant (opponent) lodged an appeal against the decision rejecting the opposition against European patent 1 477 275.
- II. The Opposition Division held that the only ground of opposition raised and substantiated (lack of inventive step, Article 100(a) EPC) did not prejudice the maintenance of the patent as granted.

The following documents were mentioned, among others, in the appealed decision:

D1: EP 1 175 961 A2

D3: US 4 493 170 A

- III. The appellant requested that the decision under appeal be set aside and that the European patent No. 1 477 275 be revoked.
- IV. The respondent requested that the appeal be dismissed.
- V. The Board summoned the parties to oral proceedings. In the letter accompanying the summons the Board considered that claim 1 of the patent as granted did not involve inventive step, starting from D1 and applying the teaching of D3.
- VI. With a letter dated 8 July 2015 the respondent submitted an auxiliary request with an amended set of claims and requested that, if the appeal could not be dismissed, the patent be maintained in this amended form.

With a fax dated 22 July 2015 the appellant requested not to admit the auxiliary request in the proceedings.

- VII. With a letter dated 10 August 2015 the respondent informed the Board that it *"will not participate in or be represented at the Oral proceedings"*.

Oral proceedings took place on 25 August 2015 in the absence of the respondent pursuant to Rule 115(2) EPC and Article 15(3) of the Rules of Procedure of the Boards of Appeal (RPBA). At the end of the oral proceedings the present decision was announced.

- VIII. The text of independent **claim 1 of the main request** (as granted) on which the present decision is based reads as follows:

"An abrading device for abrasion of substantially plane items, said device comprising means (2) for conveyance of the substantially plane items in a direction of feed (A), suspension means (10) for suspension of a plurality of abrading discs (5, 5') having abrasive means for abrasion of a side of the substantially plane items, means (18) for driving rotation of the abrading discs around axes, which are substantially perpendicular to the side of the substantially plane items, and means (22, 23) for driving the abrading discs (5, 5') in a reciprocatory movement transverse to the direction of feed (A) of the substantially plane items, characterized in that the plurality of abrading discs (5, 5) are provided with abrasive means, which comprise abrasive lamellae of an abrasive sheet, such as abrasive cloth, of which the front side has abrasive properties and which extend outwards from the face of the abrading discs (5,5'), the abrasive means further comprising an elastic support element, preferably

support brushes, which support the backside of the abrasive lamellae, said support element substantially having almost the same length as the lamellae, and in that the device further comprises at least one abrading cylinder (7, 7), which is arranged to abrade a side of the item and which preferably comprises abrasive means extending substantially radially from an elongated core, said abrading cylinder (7, 7') extend transversely to the direction of feed (A) and is driven to rotate about its longitudinal axis."

IX. **Claim 1 of the auxiliary request** contains the following addition with respect to claim 1 of the main request:

"wherein the at least one abrading cylinder is arranged after the abrading discs in the direction of feed of the substantially plane items so as to abrade the side of the item after it has been abraded by the plurality of abrading discs".

X. Insofar as relevant to the present decision the appellant argued substantially as follows:

D1 is a suitable starting point to discuss inventive step of the subject-matter of claim 1 of the main request because it discloses an abrading device comprising abrading discs and abrading cylinders, from which the claimed device only differs in the lamellar structure of the abrasive elements on the abrading discs.

Starting from this difference the problem to be solved is how to uniformly press the abrasive elements on all the surfaces of the workpiece. This problem is straightforwardly solved by applying the teachings of D3.

The subject-matter of claim 1 of the first auxiliary request lacks inventive step (Article 56 EPC) for the same reasons already discussed above, because the added features are implicitly disclosed in paragraph [0028] of D1, and therefore the differences between the device claimed therein and the device described in D1 are those already identified for claim 1 of the main request.

The auxiliary request should not be admitted in the proceedings because there are no sound reasons for filing it at such a late procedural stage, it extends the scope of the discussion as determined by the statement of grounds of appeal and the reply thereto and it is not clearly allowable.

XI. Insofar as relevant to the present decision the respondent argued in the written proceedings substantially as follows:

The apparatus described in D1 is configured to be provided with **either** abrading discs **or** abrading cylinders.

As D1 clearly indicates that each of these tools has its specific application and would give unsatisfactory results in all other cases, more in particular when both tools are combined, a skilled person starting from the device of this document would never arrive at the subject-matter of claim 1 of the main request, because in the claimed device both tools are combined in one and the same machine.

The claims of the auxiliary request are clearly allowable and have, in comparison with those of the

main request, a more restricted scope. The late filing thereof was occasioned by the new interpretation, introduced by the Board in the letter accompanying the summons to oral proceedings, of the content of the disclosure of D1. The request is therefore justified and should be admitted into the proceedings.

Reasons for the Decision

1. *Main request*

1.1 The Board gave in its annex to the summons the following opinion:

"1. *D1*

1.1 *D1 discloses an abrading device (see claim 13) for abrasion of substantially plane items (2, see figure 1), said device comprising means (3, see figure 1, claim 22, and page 5, line 16) for conveyance of the substantially plane items in a direction of feed, suspension means (19'a, see page 7, lines 35-40) for suspension of a plurality of abrading discs (25, see figures 8 and 10) having abrasive means (brushes 25a, see page 7, line 21) for abrasion of a side of the substantially plane items, means (23, see page 5, lines 50-55 and page 7, lines 50-51, together with belts 31 and 32a, visible in figure 9, see also page 7, lines 46-60) for driving rotation of the abrading discs around axes (26, see page 7, lines 41-44) which are substantially perpendicular to the side of the substantially plane items, and means (14, see page 7, line 52, and page 5, starting from line 53) for driving the abrading discs (25) in a reciprocatory movement transverse to the direction of feed of the substantially plane items.*

D1 therefore mentions all the features of the preamble of claim 1 of the patent in suit.

The respondent refers to paragraph [0008] of D1 and argues that the object of D1 is to provide a machine that can be used for different types of surfaces, and that this document mentions two completely different and alternative tools whose purpose is to be easily exchanged for one another.

This apparatus would therefore be configured to be provided with **either** abrading discs **or** abrading cylinders.

The respondent further argues that D1 clearly indicates that each of these tools has its specific applications, and would give unsatisfactory results (the respondent refers to paragraph [0009] in this context) in all the other cases, and concludes that a skilled person reading this document would never take a configuration with both tools in the same machine under consideration.

1.2 The Board disagrees.

According to a preferred embodiment of D1 (see paragraph [0011]) the device has a **first working unit** carrying a cylindrical brush, and a **second working unit** carrying abrasive discs.

A combination of a cylindrical brush (in a working unit) **and** abrasive discs (in another working unit) is also mentioned in claim 13, and at page 7, lines 4-9 of D1.

D1 only excludes the contemporary presence of both tools in one and the **same working unit** (see paragraph [0039]).

The Board is therefore of the preliminary opinion that D1 also discloses that the device further comprises at least one abrading cylinder (6), which is arranged to abrade a (top) side of the item and which preferably comprises abrasive means extending substantially radially from an elongated core (bristles, see page 7, line 6: "Bürstenwalze"), whereby said abrading cylinder (6) extends transversely to the direction of feed (as clearly visible in figure 1) and is driven to rotate about its longitudinal axis (see page 6, starting from line 48).

2. Difference

The abrasive discs mentioned in D1 are completely different from those claimed in claim 1 of the patent in suit.

The abrasive means of the abrasive discs described in D1 do not comprise abrasive lamellae of an abrasive sheet (such as abrasive cloth) of which the front side has abrasive properties and which extend outwards from the face of the abrading discs, the abrasive means further comprising an elastic support element (preferably support brushes) which support the backside of the abrasive lamellae, said support element substantially having almost the same length as the lamellae.

3. *Effect*

The effect linked to this particular configuration of the abrasive means is explained in paragraph [0010] (see column 2, starting from line 55) of the patent in suit: the abrasive surface of these means is oriented in a tangential direction of the disc, as a consequence of that their abrasive front side is pressed on the reliefs of a structured working surface and kept thereon with a relatively constant pressure along their length already at low rotational speed, resulting in a uniform abrasion.

4. *Problem to be solved*

The problem to be solved may therefore be formulated as: how to improve the performance of the abrasive discs of D1.

5. *Obviousness*

D3 is a document dealing with abrasive devices (see column 1, lines 10-36) and therefore belongs to the same technical field of D1 and of the patent in suit.

This document also addresses the issues of achieving a constant and reliable pressure between the tool and the workpiece.

In order to achieve this result abrasive means (called "sanding fingers", see figure 14 and column 5, starting from line 31) are proposed, comprising abrasive lamellae of an abrasive sheet (25, sandpaper), of which the front side has abrasive properties and which extend outwards from the face of the abrading discs (as shown, for example, in figures 4 and 5), the abrasive means

further comprising an elastic support element (165, called biasing spring), which support the backside of the abrasive lamellae, said support element substantially having almost the same length as the lamellae (as clearly visible in figure 14).

These abrasive means correspond to those claimed in claim 1 of the patent in suit and represent the difference between the subject matter of this claim and the content of the disclosure of document D1.

The skilled person would immediately understand from the text of D3 the advantages of this configuration, and have no practical difficulties in applying it to the discs known from D1.

Accordingly the subject matter of claim 1 of the patent in suit does not appear to involve an inventive step (Articles 52(1) and 56 EPC) over the prior art."

- 1.2 The respondent did not submit further arguments as to substance against this opinion, but filed an auxiliary request and subsequently informed the Board that it would not attend the oral proceedings.

After having reconsidered the case, the Board sees no reason to change its opinion as given in point 1.1 above and considers that the subject-matter of claim 1 as granted does not involve an inventive step in the sense of Article 56 EPC.

2. *First auxiliary request*

- 2.1 Content of the disclosure of D1

Paragraph [0028] of D1 mentions that the abrading device ("Bearbeitungsvorrichtung") comprises one or more working areas ("Bearbeitungszone") arranged one after the other and in each of these areas there is at least a first tool unit ("Werkzeugeinheit") which carries an abrading cylinder ("Bürstenwalze") and a second tool unit carrying a group of abrading discs ("tellerförmigen Bearbeitungswerkzeugen").

As discussed at the oral proceedings, paragraph [0028] also gives the information that these tool units can be operated selectively ("wahlweise betrieben"), but also that they can be exchanged one for the other ("gegeneinander auswechselbar").

This passage therefore not only discloses the configuration in which the abrading cylinder is arranged before the abrading discs but also the opposite, where the abrading cylinder follows the abrading discs in the direction of feed of the substantially plane items to be abraded.

It is essentially the invention of D1 that the abrading cylinder and the group of abrading discs are each comprised in otherwise identical modular units, which are interchangeable. D1 in fact discloses two apparatuses:

-one with only a single working area, where there is only place for one of the modular units, and

-one with two working areas, as described at paragraph [0028], where two modular units can be placed in any required arrangement since they are interchangeable.

As a consequence of the above none of the features added to claim 1 of the first auxiliary request is suitable to establish a further difference over the content of the disclosure of D1.

2.2 Lack of inventive step

As the differences correspond to those already identified in the discussion of claim 1 of the main request, and the same technical problem can be formulated, the Board comes to the conclusion that also the subject-matter of claim 1 of the auxiliary request lacks inventive step, for the same reasons (see point 1.1 above) already discussed for the main request.

2.3 Admissibility of the auxiliary request

The above mentioned lack of inventive step over the combination of the teachings of documents D1 and D3 is the basis for taking the present decision, revoking the patent in suit. There is therefore no need to discuss the admissibility of the auxiliary request.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

European patent No. 1477275 is revoked.

The Registrar:

The Chairman:



G. Nachtigall

H. Meinders

Decision electronically authenticated