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**Datasheet for the decision
of 18 February 2020**

Case Number: T 0363/16 - 3.2.03

Application Number: 03723499.4

Publication Number: 1497503

IPC: E02D7/26, E02D7/28

Language of the proceedings: EN

Title of invention:

METHOD AND SYSTEM FOR PLACING AT LEAST ONE FOUNDATION ELEMENT
IN THE GROUND

Patent Proprietor:

Gebr. Van Leeuwen Boringen B.V.

Opponent:

Körner, Andreas

Headword:

Relevant legal provisions:

EPC 1973 Art. 100(a), 56

EPC Art. 52(1), 54(2)

Keyword:

Novelty - (yes)

Inventive step - (no)

Decisions cited:

Catchword:



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Case Number: T 0363/16 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 18 February 2020

Appellant: Körner, Andreas
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 11 December
2015 rejecting the opposition filed against
European patent No. 1497503 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman G. Ashley
Members: V. Bouyssy
E. Kossonakou

Summary of Facts and Submissions

- I. European patent No 1 497 503 (in the following: "the patent") concerns a method and a system for forming at least one foundation pile or deep wall in the ground.
- II. The patent as a whole was opposed on the grounds that its subject-matter lacked novelty and inventive step (Article 100(a) EPC 1973).
- III. The opposition division decided to reject the opposition.
- IV. This decision was appealed by the opponent (in the following: the appellant).
- V. In the statement setting out the grounds of appeal, the appellant requested that the appealed decision be set aside and the patent be revoked.
- VI. By registered letter dated 3 May 2016 - without advice of delivery - a copy of the statement of the grounds of appeal was sent to the patent proprietor (in the following: the respondent), with an invitation to file any reply to it within 4 months. No reply to this letter was filed by the respondent.
- VII. With a communication dated 2 October 2018, the Board invited the respondent to specify if it has received the letter of 3 May 2016, and if so on which date. The respondent replied that the letter of 3 May 2016 was received on 11 May 2016.
- VIII. The Board sent a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2007) indicating its preliminary opinion of the

case. In particular, the Board indicated its intention to set aside the appealed decision and to revoke the patent.

IX. In a response dated 21 May 2019, the respondent informed the Board that it had decided to abandon the case. No arguments or observations, in particular with respect to the Board's preliminary opinion, were presented.

X. Claims as granted

Independent method claim 1 reads as follows (the feature numbering has been introduced by the appellant):

- (a) Method for forming at least one foundation pile or deep wall in the ground, comprising the step of
- (b) sinking one or more hollow foundation elements (1,14,30,50) into the ground with a substantially vertical orientation,
- (c) in which the sinking of the hollow foundation element (50) into the ground takes place during driving of a removable drilling head (3,9,55),
- (d) which drilling head (55), during the sinking of the foundation element (50), is in a drilling position in which the drilling head (55) extends at least partially below a bottom part of the foundation element (50)
- (e) by means of at least one excavating member (10,71) which rotates about a drive shaft (70) and has radial dimensions which are in particular greater than or equal to external dimensions of the foundation element (50),
- (f) in which the excavating member (71), at the same time as the foundation element (50) is being sunk,

- drills out earth beneath the said bottom part of the foundation element (50), and
- (g) in which at least the drilling head (55), after the foundation element (50) has been sunk, is removed again from the ground,
- characterized in that
- (h) earth which is drilled out by the excavating member (71) passes, via introduction openings (79) into a flushing chamber (80),
 - (i) which is located above the excavating member (71),
 - (j) where it is mixed with a flushing liquid,
 - (k) which is introduced into the flushing chamber (80) under pressure via at least one feed line (81),
 - (l) before then being discharged upwards to outside the foundation element (50), together with the flushing liquid, via at least one discharge line (82).

Independent system claim 16 reads as follows (the feature numbering has been introduced by the appellant):

- (1) System in particular for using the method according to one of claims 1-15, comprising:
- (2) at least one hollow foundation element (50);
- (3) an installation (2) designed to exert a substantially vertically oriented force on the foundation element (50); and
- (4) a drilling head (55) which can be lowered into the foundation element and
- (5) has at least one excavating member which can rotate about a drive shaft and,
- (6) in a drilling position, while the foundation element (50) is being sunk into the ground, has radial dimensions which in particular are greater than or equal to external dimensions of the foundation element (50),

characterized in that,

- (7) the drilling head (55) comprises a flushing chamber (80),
- (8) which is located above the excavating member (71) and
- (9) on the underside comprises introduction openings (79) provided in particular in a base plate (78),
- (10) to which flushing chamber (80) at least one feed line (81) for introducing a flushing liquid into the flushing chamber (80) under pressure is connected, and
- (11) to which flushing chamber at least one discharge line (82) for discharging the flushing liquid mixed with earth which has been drilled out from the flushing chamber (80).

XI. Cited evidence

- (a) In the statement setting out the grounds of appeal, the appellant has relied among others on the following documents which were filed in the opposition proceedings and are cited in the decision under appeal:

E1: US 4,637,758 A;
E3: US 4,406,498 A; and
E9a: DE 196 26 591 C1.

- (b) In addition, the appellant has relied on the following documents filed with the statement setting out the grounds of appeal:

E14: Product information on "MT-Piling" retrieved from the Internet <http://www.gvlboringen.com/en/mt-piling/> on 21 April 2016, 3 pages;
E15: JP 2002-106289 A, with machine translation

(E15a) and abstract (E15b);

E16: US 3,799,276 A;

E17: Foster, B. and May, M., "Concepts for a retractable TBM for remote-control tunneling", 3/15/99, 13 pages;

E18: BE 1002952 A3, with machine translation (E18a);
and

E19: US 4,046,205 A.

XII. The arguments of the appellant, insofar as relevant for the present decision, can be summarised as follows:

The subject-matter of claims 1 and 16 lacked novelty in light of E18, and lacked an inventive step in light of the following combinations:

- E1 in combination with E3 or E9a;
- the generally known technique of microtunneling, as documented in E15, in combination with E16;
- E16 in combination with E9a, E3 or common general knowledge; and
- E18 in combination with E16 and E9a.

XIII. The respondent has not made any submission.

Reasons for the Decision

1. Applicable provisions of the EPC

1.1 The patent is based on an International application which was filed under the PCT on 4 April 2003 and was still pending at the time of entry into force of the EPC 2000 on 13 December 2007.

1.2 According to Articles 1(1) and 6, first sentence of the Decision of the Administrative Council of 28 June 2001 on the transitional provisions under Article 7 of the

Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, 217), Articles 54(2), 56, 100, 111 and 114 EPC 1973 as well as Article 52 EPC (2000) apply.

2. In the absence of any submissions by the respondent, the Board must examine the merits of the appeal and thus review the opposition division's decision with respect to the novelty and inventive step of the subject-matter of the patent claims as granted.
3. In the communication under Article 15(1) RPBA 2007, the Board set out and reasoned its intention to set aside the appealed decision and revoke the patent as follows:

"8. Admission of E14 to E19 in the appeal proceedings

8.1 The filing of documents E14 to E19 is belated since they could arguably have been filed in the opposition proceedings.

8.2 The appellant has not provided, and the Board cannot find, any reason as to why these documents were filed with the statement setting out the grounds of appeal.

8.3 Nevertheless, E16 and E18 were cited in the search reports established for two divisional applications of the patent application (see search report for application Nr. 11155945.6 completed on 28 July 2014, and search report for application Nr. 11155947.2 completed on 18 July 2012) and are prima facie highly relevant for the questions of novelty and inventive step, as they both seem to come much closer to the claimed invention than E9a and E1. Thus, it seems that the opposition division could and should have

introduced these documents into the proceedings of its own motion (Article 114(1) EPC 1973). Hence, at present, the Board intends to admit E16 and E18 into the proceedings.

9. Given that the evaluation of documents E16 and E18 is straightforward and taking in consideration the need for procedural economy, the Board considers that it would be appropriate to deal with the case itself (Article 111(1) EPC 1973).

10. Novelty (Article 100(a) EPC 1973)

10.1 The opposition division has decided that the subject-matter of claims 1 and 16 as granted is novel in light of E9a. The appellant now argues that it lacks novelty in light of E18.

10.2 As submitted by the appellant, it seems that features (a) to (i) and (l) of claim 1 as well as features (1) to (9) and (11) of claim 16 can be derived from E18 (in figure 1, see hollow foundation element 14, hydraulic press device 7, drilling head 1, flushing chamber 3, discharge line 5).

10.3 However, the Board is not persuaded by the appellant's contention that E18 implicitly discloses that drill cuttings are mixed with a flushing liquid introduced into the flushing chamber under pressure via a feed line, as required by features (j) and (k) of claim 1 and feature (10) of claim 16. In fact, it seems that the method/system of E18 relies on the ground being saturated with water.

10.4 Thus, the Board is of the preliminary opinion that the claimed invention is novel in light of E18.

11. *Inventive step (Article 100(a) EPC 1973)*

11.1 *The appellant has presented several attacks based on the following combinations:*

- (a) E1 in combination with E3 or E9a;*
- (b) the generally known technique of microtunneling, as documented in E15, in combination with E16;*
- (c) E16 in combination with E9a, E3 or common general knowledge;*
- (d) E18 in combination with E16 and E9a.*

11.2 *The opposition division has decided that attacks (a) are not persuasive.*

11.3 *The method/system disclosed in either E16 or E18 appears to be the most promising and relevant starting point for the assessment of inventive step, rather than the method/system disclosed in E1 or E15. In particular, E1 fails to disclose features (h) to (l) and features (7) to (11), while E15 is not concerned with a method for driving a vertical foundation element into the ground.*

11.4 *The subject-matter of claims 1 and 16 seems to differ from either E16 or E18 by features (j) and (k) and feature (10), respectively.*

11.5 *At present, the Board shares the appellant's view that, starting from E16 or E18 as closest prior art, the provision of these features is an obvious modification for the skilled person to further improve the discharge of drill cuttings (see e.g. E9a, opening 13 serving as an inlet for the flushing liquid F)."*

4. In its deliberation, the Board noted that, in the absence of any arguments submitted by the respondent, the conclusions reached by the Board and communicated on a provisional basis should apply unchanged.
5. Thus, the Board is persuaded by the appellant's arguments that the subject-matter of claims 1 and 16 as granted does not involve an inventive step (Article 52(1) EPC and Article 56 EPC 1973).
6. In conclusion, the ground for opposition of lack of inventive step prejudices the maintenance of the patent as granted.

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:



C. Spira

G. Ashley

Decision electronically authenticated