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**Datasheet for the decision
of 2 July 2026**

Case Number: T 0417/25 - 3.5.05

Application Number: 16857882.1

Publication Number: 3365744

IPC: G05G1/01, E02F9/20, H01H25/04,
E02F9/08, G05D1/00, G08C17/02

Language of the proceedings: EN

Title of invention:

Remote controlled demolition robot

Patent Proprietor:

Husqvarna AB

Opponent:

Brokk AB

Headword:

Remote-controlled demolition robot/HUSQVARNA

Relevant legal provisions:

EPC Art. 123(2), 56

RPBA 2020 Art. 12(3), 12(4)

Keywords:

Added subject-matter - main request and auxiliary requests 1 and 4 (yes): "essentiality test" not applicable

Admittance of claim requests filed on appeal - auxiliary requests 2 and 5 (no): no substantiation + no suitability of amendments to address relevant issues

Inventive step - auxiliary request 3 (no): obvious modification of a suitable starting point

Decisions cited:

G 0002/10, T 0764/16, T 1450/16, T 1313/21, T 1078/23



Beschwerdekammern

Boards of Appeal

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Case Number: T 0417/25 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 2 July 2026

Appellant: Brokk AB
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Representative: Zacco Sweden AB
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Respondent: Husqvarna AB
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office
posted/electronically transmitted on 13 January
2025 concerning maintenance of the European
Patent No. 3365744 in amended form.

Composition of the Board:

Chair K. Bengi-Akyürek
Members: J. Eraso Helguera
J. Hoppe

Summary of Facts and Submissions

I. This case concerns the appeal filed by the opponent against the decision of the opposition division to maintain the opposed patent as amended in accordance with "auxiliary request 2" (labelled "14th AUX REQUEST") filed during the opposition proceedings.

II. The decision under appeal mentioned, *inter alia*, the following prior-art documents:

D1: Brokk: "Brokk Manual", Art. no. 9511, Part
No: 3136 8039 59-H GB

D3: US 8,380,402 B2.

III. Oral proceedings before the board were held on 2 July 2026. The final requests of the parties were as follows.

- The opponent (appellant) requested that the decision under appeal be set aside and that the patent be revoked.
- The proprietor (respondent) requested, as its **main request**, that the appeal be dismissed, i.e. that the patent be maintained in accordance with the claim request labelled "14th AUX REQUEST" or, as an auxiliary measure, that the patent be maintained in amended form on the basis of one of **auxiliary requests 1 to 4**, all of them first filed with the written reply to the opponent's statement of grounds of appeal, and **auxiliary request 5**, filed in response to the board's preliminary opinion and identical in content to auxiliary request 2.

At the end of the oral proceedings, the board announced its decision.

IV. Claim 1 of the **main request** (labelled "14th AUX REQUEST") reads as follows:

"A remote controlled demolition robot (10) comprising a controller (17), drive means (14), an arm member (11) movably arranged on a tower (10a) rotatably arranged on a body (11b) of the demolition robot (10) and a remote control (22) for providing commands, that are interpreted by the controller (17) causing the controller (17) to control the operation of the demolition robot (10), wherein the remote control (22) comprises a first joystick (24a) and a second joystick (24b), characterized in that each joystick (24) is provided with a thumb control switch (26), wherein the controller (17) is configured to operate the demolition robot (10) in a mode where the tower (11a), the drive means (14), the arm member(s) (11) and a hydraulic breaker or hammer being carried by the arm member (11) are operable simultaneously, wherein the tower (10a) and possibly some movements of the arm member(s) (11) are associated with the first joystick (24a), the drive means (14) are associated with the thumb control switch (26a) of each joystick (24), and the arm member(s) (11) and the hydraulic breaker or hammer being carried by the arm member (11) are associated with the second joystick (24b)."

Claim 1 of **auxiliary request 1** differs from claim 1 of the main request in the addition of the phrase "*, wherein at least one joystick (24) is provided with at least one top control switch (25)*" at the end of the claim.

Claim 1 of **auxiliary request 2** differs from claim 1 of auxiliary request 1 in the insertion of the wording "*, outriggers (15),*" right before the phrase "*and a remote control (22)*" and in the addition of the phrase "*, and wherein the outriggers (15) are associated with the top control switch (25) of the first joystick (24a)*" at the end of the claim.

Claim 1 of **auxiliary request 3** differs from claim 1 of auxiliary request 2 in the insertion of the term "*four*" right before the phrase "*outriggers (15) and a remote control (22)*".

Claim 1 of **auxiliary request 4** differs from claim 1 of the main request in the addition of the wording "*, where a control constellation of the remote control (22) is arranged such that the body (11b) is controllable by a left hand of a right-handed operator and the arm member (11) is controllable by a right hand of the right-handed operator, and where the control constellation may be reversed for a left-handed operator*" at the end of the claim.

Claim 1 of **auxiliary request 5** is the same as claim 1 of auxiliary request 2.

Reasons for the Decision

1. MAIN REQUEST

1.1 Claim 1 of the **main request** (labelled "14th AUX REQUEST") comprises the following limiting features:

F1 A remote-controlled demolition robot comprising

- F2 a controller, drive means, an arm member movably arranged on a tower rotatably arranged on a body of the demolition robot and
- F3 a remote control for providing commands, that are interpreted by the controller causing the controller to control the operation of the demolition robot,
- F4 the remote control comprises a first joystick and a second joystick,
- F5 each joystick is provided with a thumb control switch,
- F6 the controller is configured to operate the demolition robot in a mode where the tower, the drive means, the arm member(s) and
- F6a a hydraulic breaker or hammer
- F6 being carried by the arm member are operable simultaneously,
- F7 the tower and possibly some movements of the arm member(s) are associated with the first joystick,
- F8 the drive means are associated with the thumb control switch of each joystick,
- F9 the arm member(s) and
- F9a the hydraulic breaker or hammer
- F9 being carried by the arm member are associated with the second joystick.

1.2 *Claim 1 - added matter (Article 123(2) EPC)*

- 1.2.1 The appellant applied the so-called "*three-point essentiality test*" and concluded that the removal of the terms "top control switch" and "outriggers" from original **claim 1** violated Article 123(2) EPC.
- 1.2.2 In that regard, the respondent submitted the following arguments:

- (a) The appellant had misconstrued the "*three-point essentiality test*", which was no longer considered appropriate by the EPO. There were many possible control mappings which would allow simultaneous control of the claimed functions using only the joysticks with "thumb control switches". In addition, Figure 2B clearly showed a remote control without the use of "top control switches".
- (b) "Outriggers" were a common and important feature of "demolition robots" of the type illustrated in Figure 1 of the opposed patent. However, it was not essential that they were controlled *simultaneously* with the tower, drive means, arm members and hydraulic breaker or hammer. Original claim 1 read "*the outriggers (15) are associated with the top control switch (25)*" without an antecedent. This was an indication that the "outriggers" were not necessarily part of the "demolition robot". Indeed, the skilled person derived from their common general knowledge that "outriggers" were not a necessary feature of a "remote-controlled demolition robot", otherwise they could not recognise such a "robot" in document **D3**. In addition, "hydraulic hammers" were commonly deployed with excavators, which however did not have any "outriggers". The claimed subject-matter did not provide new technical information in view of Figures 2A and 2B. The "outriggers" would only need to be there if the "top control switch" was there. The "top control switches" were however optional.

1.2.3 The opposition division and the appellant have applied the criteria as set out in the EPO Guidelines, section H.V.3.1, items (i) to (iii). But the decisive standard

to be applied is in fact the "gold standard" (see e.g. **G 2/10**, Reasons 4.3; this also being acknowledged in the current EPO Guidelines: *"However, even if the above criteria are met, the division must still ensure that the amendment by replacing or removing a feature from a claim satisfies the requirements of Art. 123(2) as they also have been set out in G 3/89 and G 11/91, referred to in G 2/10 as 'the gold standard'").*

1.2.4 The board agrees with the appellant that the omission of the "outriggers" and their control inadmissibly adds subject-matter to claim 1, for the following reasons:

(a) It is immaterial whether or not the "outriggers" are controlled *simultaneously* with the other elements of the claimed "robot". The question at stake is whether or not the skilled person would be presented with new technical information after the amendment compared to what is disclosed in the application as originally filed according to the "gold standard". In the case at hand, the "outriggers" are not disclosed as *optional* but in fact in functional relation to the remaining features of the "robot". In other words, the originally disclosed "demolition robot" uses the "outriggers" - together with at least the "drive means", the "arm member(s)", the "tower" and the "body" - to perform its functions. This is also in line with original claim 7, which addresses a *"method for operating a remote control arranged to control a remote demolition robot"* without mentioning the "outriggers". Besides, as indicated by the appellant, page 17, lines 30 to 33 of the description as filed merely relates to the optional provision of "outrigger commands" (*"simultaneously with the other commands"*), but not to the very

presence of the "outriggers" and their control in the claimed "demolition robot". Accordingly, also the passage at page 14, lines 26 to 30 of the original description, invoked by the respondent, does not disclose the "outriggers" as being *optional* but merely explain an *optional function* of the "top control switches".

- (b) The common general knowledge is frequently invoked to justify that an implicit feature is "*directly and unambiguously derivable*" from the original disclosure, i.e. although not explicitly mentioned, the feature must be there in the specific context of the original disclosure. For instance, an electric appliance connected to the mains in a common household must have an electric plug. By the same token, for an omission to be "*directly and unambiguously derivable, using common general knowledge*", there can be no room for speculation about the circumstances that lead to the omission. The board does not dispute that demolition machinery without "outriggers" - including excavators with "hydraulic hammers" - were part of the common general knowledge. However, in the case at hand, all the embodiments presented in the application as filed feature a "demolition robot" with "outriggers", and no "excavator" is mentioned. It might well be that, confronted with the appropriate task, the skilled person would modify the original "demolition robot" and omit the "outriggers", using their common general knowledge, without the involvement of an inventive step. But this is not the same as being "*directly and unambiguously derivable*" from the application as filed. Finally, the lack of antecedent for "the outriggers" introduces ambiguity in original

claim 1. But such ambiguity cannot be used to prove that the "outriggers" and their control need not be part of the "remote-controlled demolition robot". Rather, original claim 1 further stresses that the "outriggers" indeed form part of the claimed subject-matter and nothing in the description as originally filed indicates that they were merely optional.

- (c) Even though claim 1 as filed indicates that the "top control switch" (which is not mentioned in present claim 1) is associated with "the outriggers" and that the description as filed teaches that the claimed "joysticks" may be arranged with a "top control switch" (see page 7, lines 13 to 16), at least the exemplary "set up mode" described at page 7, lines 27 to 30 (i.e. *"each joystick 24a, 24b [...] controls the outrigger(s) 15 on a corresponding side of the robot 10"*), prominently illustrates that the "joysticks" are also supposed to *"control the outriggers"*, while Figure 3 of the patent specification palpably shows that a *"hydraulic hammer"* is to be used together with *"outriggers"* on the claimed "demolition robot" (see also page 8, lines 14 to 18).

- 1.3 In view of the above, the main request is not allowable under Article 123(2) EPC.

2. AUXILIARY REQUESTS 1 TO 5

Claim 1 of each of **auxiliary requests 1 to 5** differs from claim 1 of the main request in that it further specifies that:

- F10 at least one joystick is provided with at least one top control switch [**auxiliary requests 1, 2, 3 and 5**],
- F11 the remote-controlled demolition robot further comprises outriggers and the outriggers are associated with the top control switch of the first joystick [**auxiliary requests 2, 3 and 5**],
- F12 the robot comprises four outriggers [**auxiliary request 3**],
- F13 a control constellation of the remote control is arranged such that the body is controllable by a left hand of a right-handed operator and the arm member is controllable by a right hand of the right-handed operator and the control constellation may be reversed for a left-handed operator [**auxiliary request 4**].

2.1 *Auxiliary requests 1 and 4 - claim 1 - added matter (Article 123(2) EPC)*

2.1.1 The "remote-controlled demolition robot" of claim 1 of auxiliary requests 1 and 4 does not comprise any "outriggers". Although these claim requests constitute "amendments" of the respondent's case which may be admitted only at the discretion of the board (cf. Article 12(4), first sentence, RPBA), procedural economy justifies their examination in the substance.

2.1.2 Indeed, the reasoning set out in point 1.2.4 above applies *mutatis mutandis* to claim 1 of these auxiliary requests.

2.1.3 Hence, auxiliary requests 1 and 4 are not allowable under Article 123(2) EPC, either.

2.2 *Auxiliary requests 2 and 5 - admittance (Articles 12 and 13 RPBA)*

2.2.1 **Auxiliary request 2** constitutes an "amendment" of the respondent's case under Article 12(4), first sentence, RPBA. Thus, the respondent should have provided reasons why the "amendment" overcame the objections raised and the board shall exercise its discretion in view of, *inter alia*, the complexity of the amendment, the suitability of the amendment to address the issues which led to the decision under appeal, and the need for procedural economy (cf. Article 12(4), third and fifth sentences, RPBA).

2.2.2 The respondent filed **auxiliary request 5** after having received the board's preliminary opinion, i.e. within the third level of the "convergent approach" under the RPBA. Auxiliary request 5 is however identical in content to auxiliary request 2.

2.2.3 In its written reply to the statement of grounds of appeal, the respondent identified the amendments in **auxiliary request 2**, indicated their bases in the application as filed and submitted merely that auxiliary requests 2 and 5 "*comprise additional differences compared to the prior art, further strengthening inventive step, which have been argued in detail in our previous submissions*". However, it did not provide reasons for submitting them only in the appeal proceedings, contrary to Article 12(4), third sentence, RPBA. Nor did the respondent explain what the additional differences compared with documents **D3** and **D1** are and how they contribute to the presence of an

inventive step (Article 56 EPC). During the oral proceedings, the respondent argued that **features F10 and F11** addressed the outstanding objections under Article 123(2) EPC and that, without citing any particular additional contribution of those features to the presence of an inventive step, at the very least, they did not make the claimed subject-matter "less inventive".

- 2.2.4 Concerning **auxiliary request 5**, the appellant argued that the surprising position taken by the board in its preliminary opinion constituted "exceptional circumstances" *per se*, since neither the examining division nor the opposition division had had any reservations with respect to Article 123(2) EPC.

In that regard, it is noted upfront that parties to proceedings before the Boards of Appeal always have to anticipate an unfavourable preliminary opinion of the Board at any time up to the announcement of the decision (see e.g. **T 1313/21**, Reasons 5.1.3 citing **T 764/16**, Reasons 3.3.2). This is also reflected by Article 12(3) RPBA stipulating that already the statement of grounds of appeal and the written reply to it shall contain a party's complete case. However, the board did not admit auxiliary request 2 into the appeal proceedings because it had not been sufficiently substantiated (cf. Article 12(3) and Article 12(4), third sentence, RPBA) and because, *prima facie*, it did not even suitably address all the outstanding added-matter objections raised by the opponent (Article 12(4), fourth sentence, RPBA). In particular, it was not even argued by the respondent that auxiliary requests 2 and 5 were apt to overcome the appellant's objection as regards the omission of the specific number of "outriggers". Rather, the specific number of

"outriggers" (i.e. "four") was only added to claim 1 of auxiliary request 3. In this regard, the appellant argued in its statement of grounds of appeal that Figures 1 and 3 as originally filed disclosed specifically four outriggers and that the original description could not be used as a basis for generalising the number of "outriggers", since then other additional features would need to have been present in the claimed subject-matter. In view of these arguments, the respondent should - already with its written reply to the statement of grounds of appeal - have provided an explanation *why* these objections were incorrect or overcome by the amendments in auxiliary request 2. The same requirement applies *mutatis mutandis* to any claim request filed at a later stage of the appeal proceedings (cf. Article 13(1), second sentence, and Article 12(4), fourth sentence, RPBA). However, the respondent merely pointed to originally filed claim 1 as a basis for the amendment without explaining in writing or orally *why* the specific number of "outriggers" could indeed be omitted in claims 1 and 6 of auxiliary requests 2 and 5 without incorporating the additional features, as invoked by the appellant. Therefore, the board exercised its discretion not to admit auxiliary request 2 and the corresponding auxiliary request 5 into the appeal proceedings (Article 12(4) and (5) RPBA).

2.3 *Auxiliary request 3 - claim 1 - inventive step starting from D3 (Article 56 EPC)*

Starting point

- 2.3.1 The respondent argued that prior-art document **D3** related to an entirely different problem compared to that of the opposed patent and that therefore the

skilled person would only consult a prior-art document in the expectation of solving the underlying technical problem or in the expectation of some improvement or advantage. Thus, the skilled person engaged in further improving the agility of the "remote-controlled demolition robot" according to **D1** would not consult D3, since D3 clearly related to alleviating problems directed to "foot controls".

The board, however, considers that generally no specific justification for the choice of a starting point for the assessment of inventive step is necessary if inventive step is to be denied, since the claimed subject-matter must be inventive over any state of the art according to Article 56 EPC and since it is not the task of the skilled person, who is the person qualified to solve the underlying objective technical problem according to the problem-solution approach, to "*choose a document as the closest prior art*" (see **T 1450/16**, Reasons 2.1.4). Selection criteria such as the "*same problem*" as addressed by the patent thus constitute merely a matter of efficiency for the deciding body (see e.g. **T 1078/23** and the decisions cited therein).

- 2.3.2 In fact, document **D3** belongs to the application's technical field and explicitly mentions a "breaker" as a possible "*work implement*". Thus, it indeed constitutes a suitable starting point for the assessment of inventive step. This document discloses a remote-controlled demolition robot comprising a controller, drive means, an arm member movably arranged on a tower rotatably arranged on a body of the demolition robot (see Fig. 1) and a remote control (see Fig. 3; see column 4, lines 8 to 10) for providing commands that are interpreted by the controller causing the controller to control the operation of the

demolition robot. The remote control comprises a first and a second joystick (see Fig. 4: blocks 410 and 412), each joystick is provided with a thumb control switch (see Fig. 4: blocks 414 and 416) and a top-control switch (see Fig. 4: blocks 418 and 420), the controller is configured to operate the demolition robot in a mode where the tower, the drive means, the arm member(s) and a "work implement" being carried by the arm member are operable simultaneously (see column 2, lines 43 to 46: "[...] The work-implement and propel sub-systems are simultaneously controllable independent of each other by way of the respective joysticks and auxiliary interfaces"; see column 7, lines 9 to 51: "[...] the operator may be simultaneously providing a first signal via movement of the joystick with a right or left hand, providing a second signal via the buttons 514, 516, 518 with the corresponding thumb, and providing a third signal via the button 522 with the corresponding index finger [...]"). Thus, the tower is associated with the "first joystick", the drive means are associated with the "thumb control switch" of each joystick, the arm member(s) and the "work implement" being carried by the arm member are associated with the "second joystick" of claim 1 (see Fig. 3).

Distinguishing features

2.3.3 Hence, the "demolition robot" of claim 1 differs from the equipment of D3 in:

- the use of a "hydraulic breaker" or "hydraulic hammer" (**features F6a and F9a**),
- the remote-controlled demolition robot further comprises four outriggers and the outriggers are

associated with the top control switch of the first joystick (features F11 and F12).

Technical effect and objective technical problem

- 2.3.4 *"Hydraulic breakers or hammers"* in combination with *four* "outriggers" were known in the art at the relevant date. Indeed, the skilled person would have known that a *"hydraulic breaker"* was typically used to break through very hard materials, such as rocks and concrete, and that *four* "outriggers" provide additional stability where needed. Thus, in view of the specific technical effects associated with the distinguishing features, the objective technical problem could be framed as follows:

"how to modify the equipment of D3 to implement a user interface design for performing demolition operations involving very hard materials such as rock and concrete".

This problem is considered to be a realistic one and does not contain any pointer to the solution. Yet, it takes account of the actual merits of the claimed subject-matter.

Obviousness - Could-would approach

- 2.3.5 Firstly, as to **features F6a and F9a**, although document **D3** discloses a "hydraulic cylinder" in connection with the "bucket", and a "bucket" could arguably be used in a demolition operation, it is apparent that it is not the tool of choice when *rock and concrete* are involved. Thus, the skilled person would have selected a different *"work implement"*. The board agrees with the appellant that the choice of a

"hydraulic breaker or hammer" would have been straightforward. Furthermore, column 6, lines 34 to 37 of D3 broadly states that *"signals provided by the joysticks 410, 412 are used to control a work implement of heavy equipment, such as the movement of a bucket relative to the ground (see, e.g., bucket 130 as shown in FIG. 1)"*.

Secondly, as to **features F11 and F12**, the additional presence of *four* "outriggers" associated with the "top control switch" of the "first joystick" cannot contribute to an inventive step. Indeed, the use of four "outriggers" to add stability during operation corresponds to the skilled person's customary practice. In addition, the mere association of different user-interface elements such as joysticks, buttons, switches, etc., to distinct components of a device such as a "robot", typically done on the basis of subjective user preferences and skills, cannot contribute to a synergistic technical effect (Article 56 EPC). This was, moreover, not contested by the parties at the oral proceedings before the board.

2.3.6 Thus, auxiliary request 3 is not allowable under Article 56 EPC.

3. Since there is no allowable claim request on file, the patent must 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 Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated