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**Datasheet for the decision
of 27 July 2021**

Case Number: T 1701/18 - 3.2.01

Application Number: 12165149.1

Publication Number: 2524755

IPC: B23B51/02, B23B29/24

Language of the proceedings: EN

Title of invention:

A rotatable drilling tool as well as a basic body therefor

Patent Proprietor:

Sandvik Intellectual Property AB

Opponent:

Iscar Ltd

Headword:

Relevant legal provisions:

EPC Art. 52(1), 54

RPBA Art. 12(4)

RPBA 2020 Art. 13(2)

Keyword:

Novelty - main request (no)

Late-filed request - submitted with the statement of grounds
of appeal - request could have been filed in first instance
proceedings (yes)

Late-filed auxiliary requests - admitted (no)

Amendment after summons - exceptional circumstances (no) -
taken into account (no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 1701/18 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 27 July 2021

Appellant: Sandvik Intellectual Property AB
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Representative: WSL Patentanwälte Partnerschaft mbB
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 April 2018 concerning maintenance of the
European Patent No. 2524755 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: V. Vinci
O. Loizou

Summary of Facts and Submissions

I. The appeal filed by the appellant (patent proprietor) is directed against the interlocutory decision of the opposition division to maintain the European patent No. 2 524 755 in amended form.

II. In its decision the opposition division held that the subject-matter of claim 1 as granted lacked novelty over the following prior art:

VP01: US 2005/135 887 A1 in the light of

VP11: WO 03/070 408 A1 cited therein.

The opposition division further held that the subject-matter of claim 1 of the auxiliary requests I to III lacked inventive step in view of the combination of VP01/VP11 with document

VP04: US 5 678 960 A,

and decided to maintain the patent in amended form according to the auxiliary request IV.

III. With a communication according to Article 15(1) RPBA dated 26 June 2020 following the summons to oral proceedings dated 25 May 2020, the Board informed the parties of its preliminary assessment of the case.

IV. Oral proceedings pursuant to Article 116 EPC were held before the Board on 27 July 2021 by videoconference.

V. The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be

maintained as granted (main request) or in the alternative that the patent be maintained in amended form on the basis of the auxiliary request I filed with the statement of grounds of appeal, or one of auxiliary requests II and III filed with letter dated 28 June 2021.

The respondent (opponent) requested that the appeal be dismissed.

VI. Claim 1 as granted reads as follows (labelling added):

F1 "Rotatable drilling tool for chip removing machining comprising

F1.1 a basic body (1) and

F1.2 an insert top (2) that is detachably connectable to the basic body (1),

F1.3 the insert top (2) having an axial extension along a longitudinal axis (4) between a front insert end having chip removing capacity and a rear coupling end, which front insert end has a cutting diameter that in an associated cross-section defines a cutting circle (23) having the longitudinal axis (4) as the centre,

F1.4 the basic body (1) having an axial extension along a longitudinal axis (4) between a front coupling end a rear fixing end, and comprising at least one chip flute (9, 40, 41),

F1.5 each at least one chip flute (9, 40, 41) extending from the coupling end toward the fixing end and being formed in such a way that, when the insert top (2) is connected to the basic body (1), chips that are

removed by the insert are received in some one of each at least one chip flute (9) for the transportation to the fixing end,

F1.6 in its coupling end, the insert top (2) having a male part (5) that extends axially outward from the coupling end,

F1.7 in its coupling end, the basic body having a female part (14) that extends from the coupling end axially inward in the basic body (1), which female part (14) is formed for the receipt of the male part (5) of the insert top (2) when the insert top (2) is connected to the basic body (1),

F1.8 wherein, the basic body comprises a wall portion (34, 36) between the female part (14) and each at least one chip flute (9, 40, 41), and

F1.9 each at least one chip flute (9, 40, 41), in each cross-section along the longitudinal axis (4) of the basic body, having a depth that is equal to the difference between the radius of said cutting circle (23) and a radius of the greatest possible core circle (29, 32, 46, 48, 50, 52) that has the longitudinal axis as the centre and that is tangent to a limiting curve of the respective chip flute in the cross-section in question, characterized in that

F1.10 the basic body (1) is longitudinally divided into a coupling segment (10) that extends axially rearward from the coupling end of the basic body, and into a transportation segment (12) that is situated axially behind the coupling segment (10), extends rearward toward the fixing end of the basic body (1), and is longer than the coupling segment (10), each at least

one chip flute (9, 40, 41) extending through the coupling segment (10) and the transportation segment (12),

F1.11 at least essentially the entire female part (14) is situated in the coupling segment (10), and

F1.12 each at least one chip flute (9, 40, 41) has a smaller depth in the coupling segment (10) than in the transportation segment (12)."

Claim 1 of the auxiliary request I reads as follows (labelling added):

F1 "Rotatable drilling tool for chip removing machining comprising

F1.1 a basic body (1) and

F1.2 an insert top (2) that is detachably connectable to the basic body (1),

F1.3 the insert top (2) having an axial extension along a longitudinal axis (4) between a front insert end having chip removing capacity and a rear coupling end, which front insert end has a cutting diameter that in an associated cross-section defines a cutting circle (23) having the longitudinal axis (4) as the centre,

F1.4 the basic body (1) having an axial extension along a longitudinal axis (4) between a front coupling end and a rear fixing end, and comprising at least one chip flute (9, 40, 41),

F1.5 each at least one chip flute (9, 40, 41) extending from the coupling end toward the fixing end and being

formed in such a way that, when the insert top (2) is connected to the basic body (1), chips that are removed by the insert are received in some one of each at least one chip flute (9) for the transportation to the fixing end,

F1.6 in its coupling end, the insert top (2) having a male part (5) that extends axially outward from the coupling end,

F1.7 in its coupling end, the basic body having a female part (14) that extends from the coupling end axially inward in the basic body (1), which female part (14) is formed for the receipt of the male part (5) of the insert top (2) when the insert top (2) is connected to the basic body (1), wherein the male part comprises a projecting pin having an arbitrary cross-section, wherein the female part has the corresponding cross-section,

F1.8 wherein, the basic body comprises a wall portion (34, 36) between the female part (14) and each at least one chip flute (9, 40, 41), the web of the basic body becoming wider in the coupling segment than in the transportation segment, and

F1.9 each at least one chip flute (9, 40, 41), in each cross-section along the longitudinal axis (4) of the basic body, having a depth that is equal to the difference between the radius of said cutting circle (23) and a radius of the greatest possible core circle (29, 32, 46, 48, 50, 52) that has the longitudinal axis as the centre and that is tangent to a limiting curve of the respective chip flute in the cross-section in question, characterized in that

F1.10 the basic body (1) is longitudinally divided into a coupling segment (10) that extends axially rearward from the coupling end of the basic body, and into a transportation segment (12) that is situated axially behind the coupling segment (10), extends rearward toward the fixing end of the basic body (1), and is longer than the coupling segment (10), each at least one chip flute (9, 40, 41) extending through the coupling segment (10) and the transportation segment (12),

F1.11 at least essentially the entire female part (14) is situated in the coupling segment (10), and

F1.12 each at least one chip flute (9, 40, 41) has a smaller depth in the coupling segment (10) than in the transportation segment (12)."

Claim 1 of the auxiliary request II is identical to claim 1 of the auxiliary request I. Claim 15 of the patent as granted which was still present in the auxiliary request I has been deleted.

Claim 1 of the auxiliary request III reads as follows (labelling added):

F1 "Rotatable drilling tool for chip removing machining comprising

F1.1 a basic body (1) and

F1.2 an insert top (2) that is detachably connectable to the basic body (1),

F1.3 the insert top (2) having an axial extension along a longitudinal axis (4) between a front insert end

having chip removing capacity and a rear coupling end, which front insert end has a cutting diameter that in an associated cross-section defines a cutting circle (23) having the longitudinal axis (4) as the centre,

F1.4 the basic body (1) having an axial extension along a longitudinal axis (4) between a front coupling end a rear fixing end, and comprising at least one chip flute (9, 40, 41),

F1.5 each at least one chip flute (9, 40, 41) extending from the coupling end toward the fixing end and being formed in such a way that, when the insert top (2) is connected to the basic body (1), chips that are removed by the insert are received in some one of each at least one chip flute (9) for the transportation to the fixing end,

F1.6 in its coupling end, the insert top (2) having a male part (5) that extends axially outward from the coupling end,

F1.7 in its coupling end, the basic body having a female part (14) that extends from the coupling end axially inward in the basic body (1), which female part (14) is formed for the receipt of the male part (5) of the insert top (2) when the insert top (2) is connected to the basic body (1), wherein the male part comprises a projecting pin having an arbitrary cross-section, wherein the female part has the corresponding cross-section,

F1.8 wherein, the basic body comprises a wall portion (34, 36) between the female part (14) and each at least one chip flute (9, 40, 41), the web of the basic body becoming wider in the coupling segment than in the

transportation segment, and

F1.9 each at least one chip flute (9, 40, 41), in each cross-section along the longitudinal axis (4) of the basic body, having a depth that is equal to the difference between the radius of said cutting circle (23) and a radius of the greatest possible core circle (29, 32, 46, 48, 50, 52) that has the longitudinal axis as the centre and that is tangent to a limiting curve of the respective chip flute in the cross-section in question, wherein

F1.10 the basic body (1) is longitudinally divided into a coupling segment (10) that extends axially rearward from the coupling end of the basic body, and into a transportation segment (12) that is situated axially behind the coupling segment (10), extends rearward toward the fixing end of the basic body (1), and is longer than the coupling segment (10), each at least one chip flute (9, 40, 41) extending through the coupling segment (10) and the transportation segment (12), and wherein

F1.11 at least essentially the entire female part (14) is situated in the coupling segment (10), and

F1.12 each at least one chip flute (9, 40, 41) has a smaller depth in the coupling segment (10) than in the transportation segment (12), characterized in that

F1.13 the difference between the depth of each at least one chip flute in the transportation segment and in the coupling segment is minimally 0.5 % of the diameter of said cutting circle and is maximally 3 % of the diameter of said cutting circle."

Furthermore, also in the auxiliary request III independent claim 15 of the main request has been deleted.

Reasons for the Decision

MAIN REQUEST

The disclosure of VP01 having regard to the reference to VP11

1. The appellant (patent proprietor) contested the decision of the opposition division that held that VP01 would be read by the skilled person in combination with VP11 (cited in paragraph [0013] of VP01) regarding the details of the connection to the insert top, thereby providing a single disclosure (in the meaning of Article 54(2) EPC) of a drilling tool with the body of VP01 and the details of the connection of VP11.
- 1.1 Regarding this issue the appellant (patent proprietor) at the oral proceedings merely referred to the arguments submitted in writing. There it was argued that the reference in paragraph [0013] of VP01 to the *"interchangeable cutting tip"* disclosed in document VP11 would direct the attention of the person skilled in the art exclusively to the cutting geometry of the cutting insert disclosed therein, rather than to the details of the connecting portions of both the basic body and of the cutting insert shown in figures 1 to 3. The appellant (patent proprietor) thus concluded that - contrary to the view of the opposition division and the respondent (opponent) - the technical information regarding the connecting portions disclosed in VP11

could not be considered directly and unambiguously disclosed in combination with and applied to the drilling tool of document VP01.

- 1.2 As no further arguments were provided during the oral proceedings, the Board sees no reason to deviate from the conclusion already expressed in its preliminary opinion and accepts the arguments of the opposition division and the respondent (opponent) to be correct for the following reasons:

The Board observes that paragraph [0013] of VP01, second sentence, indeed refers to an "interchangeable cutting tip", whereby the explicit reference to the interchangeability will directly and unambiguously prompt the attention of the person skilled in the art to the technical features of the connecting portions of the insert and of the basic body described in VP11 which render the cutting insert interchangeable. Therefore, the person skilled in the art would directly and unambiguously derive that the connection portions of the drilling tool in figure 2 of VP01 are embodied according to figures 1 to 3 of document VP11. The decision of the opposition division to consider these two prior art documents as a single disclosure of a drilling tool with the body of VP01 and the details of the clamping of VP11 (in the following referred to as VP01/VP11) is thus thereby confirmed.

Novelty: Articles 52(1) and 54 EPC

- 1.3 The appellant (patent proprietor) contested the conclusion of the opposition division in the decision under appeal that the subject-matter of claim 1 as granted lacked novelty over VP01/VP11 because this prior art did not disclose feature F1.8:

"the basic body comprises a wall portion (34, 36) between the female part (14) and each at least one chip flute (9, 40, 41)".

This assertion was substantiated by arguing, among others, that the technical expression *"female part"* in itself, when referred to a connector assembly, inherently implied that the female part comprised a recess entirely surrounded by a continuous wall portion. The appellant (patent proprietor) thus concluded that the assessment of the opposition division that the recess (16) delimited by the legs (9) provided on the connecting portion of the basic body of the drilling tool in figure 2 of VP11 would represent a *"female part"* in the meaning of claim 1 was not technically consistent with the meaning that the person skilled in the art would generally confer to this term and thus be not correct.

- 1.4 As the patent proprietor at the oral proceedings only supported the assertions above by referring to the arguments provided in writing, the Board sees no reason to deviate from the conclusions presented in its preliminary opinion which are the following:
- 1.5 The Board is convinced that in the present technical context (analogous to that of a *"plug and-socket"* type connector), the term *"female part"* does not compulsory imply that the cavity provided in the female element of the connection for cooperating with the complementary male part must be entirely surrounded by a continuous wall. This view was convincingly supported by the respondent (opponent) when referring to the structure of the well known "Belling-Lee" female/male connector for the antenna coaxial cables which in fact consists

of a female part having a recess surrounded by a non-continuous, slotted wall. The examples of male/female connectors with a recess in the female part entirely surrounded by a continuous wall provided by the appellant (patent proprietor) in support of its view are thus not exhaustive. The assessment of the opposition division that the term "*female part*" in claim 1 as granted does not inherently imply a recess entirely surrounded by a continuous wall is thus hereby confirmed.

- 1.6 The appellant (patent proprietor) further argued that feature F1.8 of claim 1 as granted, when interpreted in the technical context of the claim and in particular in view of the wording of features F1.7 and F1.9, would lead the person skilled in the art to the conclusion that the "*female part (14)*" in the meaning of claim 1, unlike the recess shown in figure 2 of VP11, comprised a recess entirely surrounded by a continuous wall. The reasoning of the appellant (patent proprietor) is based on the assumption that the single technical features of the basic body and of the insert top defined in claim 1 should be assessed by referring to the drilling tool in a disassembled state, i.e. with the insert top separated from the basic body. In the appellant's view this construction of the claim was supported by the wording of feature F1.2 stating that the insert top is "*detachably connectable*", rather than connected to the basic body and of feature F1.5 reading "*when the insert top (2) is connected to the basic body (2)*". Furthermore the appellant (patent proprietor) expressed the view that feature F1.4 unambiguously indicated that the "*at least one chip flute*" defined in claim 1 was a chip flute fully provided on the basic body only, i.e. not even partially on the insert top. This applied in particular to the at least one chip flute of feature

F1.9, whereby the definition of the depth of the chip flute given therein only made sense when the female part provided in the basic body had a recess entirely surrounded by a continuous wall, and that was not disclosed in VP01/VP11.

- 1.7 Also these lines of arguments of the appellant (patent proprietor) are not convincing for the following reasons:

Claim 1 is directed to a single entity, namely a *"rotatable drilling tool"* comprising a basic body and an insert top, rather than to a basic body and an insert top suitable for a rotatable drilling tool. As correctly pointed out by the respondent (opponent), a basic body and an insert top in the disassembled state suggested by the appellant (patent proprietor) would not achieve the drilling functionality which is inherent with the rotatable drilling tool to which, according to feature F1, claim 1 is expressly directed. The Board shares the view of the respondent (opponent) that the cited wording of feature F1.2 only emphasizes the fact that the connection provided between the basic body and the top insert is detachable, while the wording of feature F1.5 makes clear that the at least one chip flute suitable for transportation of the chips removed by the cutting insert to the fixing end of the tool are provided also in part on the insert top. This is indeed confirmed by figure 4 and paragraph [0087] of the contested patent, lines 9-15 cited by the respondent (opponent).

- 1.8 In view of the above, the construction of claim 1 proposed by appellant (patent proprietor) cannot be followed and therefore the conclusion based thereon that features F1.7 to F1.9 read in combination and

referred to the tool in the disassembled state would implicitly require that the wall portion entirely surrounded the female part, cannot be followed either. The Board thus agrees with the assessment of the opposition division that the recess (16) in figure 2 of VOP11, delimited by the legs (9) which are part of the front coupling end (4) of the basic body (2), does correspond to a "*female part*" in the meaning of the sole contested feature Fl.8 at stake read in the broader meaning that the person skilled in the art will give to this term.

- 1.9 Hence the Board does not see any reason to deviate from the conclusions of the opposition division that the subject-matter of claim 1 as granted lacks novelty in the meaning of Articles 52(1) and 54 EPC over the state of the art represented by VP01/VP11.

Admissibility of the auxiliary requests I to III

Auxiliary request I

2. The auxiliary request I has been filed for the first time with the statement of the grounds of appeal. Its admittance in the appeal proceedings is contested by the respondent under Article 12(4) RPBA in the version 2007 which according to the transitional provisions of Article 25(2) RPBA 2020 applies to the present appeal.
- 2.1 According to Article 12(4) RPBA 2007 the Board has a discretion not to admit requests which could have been presented in the first instance proceedings. The appellant (patent proprietor) argued that the auxiliary request I contained the additional feature relating to the provision of a projecting pin on the male part and that this feature was introduced as a reaction to the

view of the opposition division that the feature relating to the dimension of the width of the web of the basic body was not suitable for further distinguishing the subject-matter of claim 1 as granted from VP01/VP11. The appellant (patent proprietor) asserted that as this view was expressed for the first time in the appealed decision, as confirmed by the minutes, there was no opportunity for the appellant (patent proprietor) to amend claim 1 of the main request, in an attempt to restore novelty, before filing the statement of the grounds of appeal.

2.2 The Board does not agree for the following reasons:

As discussed above, the only issue at stake and relevant to the assessment of novelty of the subject-matter of claim 1 of the main request relates to the controversial interpretation of the term *"female part"* in claim 1. The opposition division had already informed the parties with its preliminary opinion (see point 7.1.1) that it was inclined not to follow the narrow interpretation of the patent proprietor according to which the female part of a connection mandatorily implies a continuous wall entirely surrounding a recess. This view was confirmed during the oral proceedings upon rejection of claim 1 as granted for lack of novelty over VP01/VP11. At this point the appellant (patent proprietor) decided to rely on other limitations introduced in the auxiliary requests filed in opposition in order to restore novelty without any attempt to clarify the meaning of *"female part"*. This was done for the first time with the statement of the grounds of appeal by introducing the reference to a *"connecting pin with arbitrary cross-section"* in claim 1 of the auxiliary I request, whereby this feature was taken from the description.

Under these circumstance, in particular because i) limitation of a feature preliminarily considered as too broad by the Opposition Division and ii) extracting a feature from the description, the Board concurs with the respondent (opponent) that this amendment could and should have been already filed in reaction to the preliminary opinion of the opposition division or during the oral proceedings at the latest, for example upon becoming aware of the final negative assessment of the novelty of the subject-matter of claim 1 of the main request confirming the broad interpretation of the term "*female part*".

- 2.3 In view of the above and exercising the discretion conferred by Article 12(4) RPBA 2007 the Board decided not to admit the auxiliary request I in the appeal proceedings.

Auxiliary requests II and III

- 2.4 These auxiliary requests have been submitted after notification of the summons to oral proceedings. According to Article 13(2) RPBA in the version 2020 that according to the transitional provisions of Article 25(1) and (3) RPBA applies to the present appeal, any amendments to a party's appeal case made after notification of a summon to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

- 2.5 Claim 1 according to auxiliary request II is identical to claim 1 of auxiliary request I, which could have been filed in the first instance proceedings as explained above. Accordingly, and considering that auxiliary request II having been filed at a late stage

in appeal proceedings, the Board has a fortiori no reasons for taking it into account since there are no cogent reasons justifying this late filing.

2.6 Claim 1 of the auxiliary request III comprises, besides the same feature relating to the provision of the connection pin introduced in claim 1 of the previous auxiliary requests, a further limitation consisting in the indication of a range for the difference between the depth of each at least one chip flute in the transportation segment and in the coupling segment. The appellant (patent proprietor) pointed out that this feature was already claimed in claim 1 of the first instance auxiliary request I which was rejected due to lack of inventive step. The appellant (patent proprietor) argued that due to the clearly different subject-matter of the sole independent claim 1, the auxiliary request III could not be considered equivalent to the auxiliary request I when assessing admissibility. Furthermore, it was put forward that this amendment of the appellant's party case, aiming to solve the novelty issue at stake, should be considered as a legitimated and timely reaction to the outcome of the decision and to the the preliminary assessment of the case by the Board.

2.7 However, the Board concurs with the respondent (opponent) that, due to the presence in claim 1 of the feature relating to the provision of the connection pin introduced in the previous auxiliary requests, the same arguments against the admittance of the auxiliary requests I and II apply analogously to the auxiliary request III, and that also in this case no exceptional circumstances justify deferring the submission of this request until after the issuing of the summons to oral

proceedings is apparent to the Board.

2.8 Consequently the auxiliary requests II and III are not admitted in the appeal proceedings under Article 13(2) RPBA 2020.

3. In conclusion, as the main request is not allowable and all the auxiliary requests at stake are not admissible, the decision under appeal is hereby confirmed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated