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**Datasheet for the decision
of 29 November 2024**

Case Number: T 1479/22 - 3.2.01

Application Number: 06255469.6

Publication Number: 1782902

IPC: B23C5/20, B23C5/06

Language of the proceedings: EN

Title of invention:

Replaceable-blade cutting insert and corner milling cutter with
replaceable cutting insert

Patent Proprietor:

Sumitomo Electric Hardmetal Corp.

Opponent:

Iscar Ltd.

Headword:

Relevant legal provisions:

EPC Art. 83, 111(1)

RPBA 2020 Art. 11

Keyword:

Sufficiency of disclosure - main request (yes)
Remittal - special reasons for remittal (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1479/22 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 29 November 2024

Appellant: Sumitomo Electric Hardmetal Corp.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 14 April 2022
revoking European patent No. 1782902 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

- I. The appeal filed by the patent proprietor (appellant) is directed against the decision of the opposition division revoking the European patent No. 1 782 902.

The opposition division found that the ground for opposition pursuant to Article 100(c) in association with Article 123(2) EPC was prejudicial to the maintenance of the patent as granted, and that the main request A filed on 24 November 2021 was allowable under Article 123(2) EPC but did not meet the requirements of Article 83 EPC. Since the auxiliary requests were either not admitted or found not to comply with the requirements of Articles 123(2) or 83 EPC, the patent was revoked.

Oral proceedings pursuant to Article 116 EPC were held before the Board on 29 November 2024 by videoconference.

- II. The appellant (patent proprietor) requested that the decision under appeal be set aside and that case be remitted to the opposition division for examination of novelty and inventive step of the main request A filed with letter dated 24 November 2021 or, in the alternative, of the corrected auxiliary request 1 filed with letter dated 3 October 2022 or the auxiliary requests 2 to 8 filed with the statement of grounds of appeal.

The respondent (opponent) requested that the appeal of the appellant (patent proprietor) be dismissed. Furthermore, in accordance with the request of the appellant (patent proprietor), it was requested that

the case be remitted to the opposition division for the consideration of novelty and inventive step.

III. Independent claim 1 according to the main request A filed on 24 November 2021 reads as follows (labelling as adopted by the parties in their submissions):

(A) *"A replaceable-blade cutting insert for comer milling cutters including: a first surface (1) and a second surface (2) facing opposite directions; a third surface (3) and a fourth surface (4) intersecting with and connecting to said first surface and said second surface; a fifth surface (5) and a sixth surface (6) intersecting with said first surface and said second surface and said third surface and said fourth surface;*

(B) *wherein said first surface (1) is used as a rake face, said third surface (3) is used as an outer perimeter flank face, and said fifth surface is used as a front flank face, characterised in that*

(C) *a respective twisted surface (10) is formed at each comer (C1, C2, C3, C4) of each of said third and fourth surfaces (3, 4), said twisted surfaces (10) intersecting with adjacent ones of said first and second surfaces (1, 2) and creating with each adjacent one of said first and second surfaces (1, 2) a respective ridge line (7), each said ridge line (7) serving as a main cutting section,*

(D) *said twisted surfaces (10) being sloped with a slope angle (a) of greater than 3 degrees and less than 15 degrees relative to the third surface (3) and the fourth surface (4) and in a direction that increases an intersection angle with adjacent one of said first and second surfaces (1,2),*

(E) *each said twisted surface (10) being formed with a width (W) that gradually decreases with increasing distance along said respective ridge line (7) from a respective said corner (C1, C2, C3 , C4)."*

Reasons for the Decision

1. The appeal of the appellant (patent proprietor) is primarily directed against the conclusion of the opposition division in the impugned decision that the main request A filed on 24 November 2021 did not meet the requirements of Article 83 EPC.

MAIN REQUEST A

Sufficiency of Disclosure - Article 83 EPC

2. Contrary to the findings of the opposition division, the patent as amended according to the main request A meets the requirements of Article 83 EPC.
 - 2.1 In the decision under appeal, the opposition division followed the argument of the respondent (opponent) that the slope angle (α) recited in feature (D) of claim 1 was univocally and consistently measurable only if the third and fourth surfaces (3,4) were flat. It was argued however that, according to paragraph [0028] of the contested patent, these surfaces could also "*be formed as multiple flat and curved surfaces*". The respondent (opponent) pointed out that manufacturing the third and fourth surface (3,4) recited in claim 1 as curved or partially curved surfaces was a technically meaningful design option and not - as

alleged by the appellant (patent proprietor) - a mere hypothetical possibility. This fact was exemplarily demonstrated by the embodiment in Figure 6 of document US2005/0169716 labelled as evidence D3 in the decision under appeal and by the embodiments in Figures 8 and 9 of document US2004/0208713 submitted with the reply to the statement of grounds of appeal the admissibility of which was contested by the appellant (patent proprietor). In the appealed decision, the opposition division also followed the view of the respondent (opponent) that a multiple flat or curved surface had different tangent lines with different angular orientations throughout its extension whereby, in order to measure the angle between two curved surfaces a reference line had to be chosen for each surface. The opposition division argued that in the case of multiple flat or curved surfaces different reference lines could be selected, for example the tangent line at the intersection between the two surfaces in cross-section, the tangent at the opposite end, the average tangent line or the chord line. However, the opposed patent did not give any guidance - be it explicit or implicit - on which reference lines had to be chosen to measure the slope angle (α) when the third and fourth surfaces (3,4) were curved or formed as multiple curved and flat surfaces and/or when, in addition, also the twisted surface (10) was curved. The respondent (opponent) concurred with the opposition division that the choice of the reference lines determined indeed whether the slope angle (α) measured accordingly fell within the claimed range or not, and whether the technical effect claimed in the contested patent was achieved or not within the whole range encompassed by the claim 1, i.e. also in the case of curved or partially curved surfaces. In fact, although as pointed out by the opposition division there were multiple possibilities

to select the reference line and hence multiple ways of measuring the slope angle, the patent did not indicate which was the one to be selected when manufacturing a cutting insert with a geometry according to claim 1. The respondent (opponent) pointed out that all the specific embodiments shown in the figures of the contested patent related to the case where the third and fourth surface and the slope surface were flat. In this case the way of measuring the slope angle was univocal. However they maintained, in accordance to the view of the opposition division, that in absence of any indication in the contested patent regarding which reference line had to be used in all the cases encompassed by claim 1, which according to paragraph [0028] also covered surfaces formed as multiple flat and curved surfaces, the person skilled in the art was unable to define and hence consistently measure the slope angle (α) in the whole range of the claim and hence to assess whether they were working within its scope. This clearly resulted in a lack of sufficient disclosure of the claimed invention infringing Article 83 EPC and not in a way of mere lack of clarity under Article 84 EPC as alleged by the appellant (patent proprietor).

2.2 The appellant (patent proprietor) contested the broad interpretation of paragraph [0028] of the patent adopted by the opposition and the respondent (opponent) on which the conclusions of the decision under appeal were based. In their opinion, this paragraph could not be read to such an extent to include embodiments with curved surfaces and/or comprising protrusions, recesses and/or serrations as alleged by the respondent (opponent) in their reply. These embodiments read by the opposition division and the respondent (opponent) in paragraph [0028] of the contested patent were merely

hypothetical. The appellant (patent proprietor) argued that according to a reasonable interpretation by a person skilled in the art, this paragraph was meant to encompass also the possibility to have a humped third or fourth surface (3,4) according for example to the embodiment in Figure 4b of the patent, wherein at the transition between the flat surface portions 3a and 3b a curved portion could be provided. The appellant (patent proprietor) further argued that an angle between a first curved and a second flat or curved surface can be always measured. In their opinion, this fact was also acknowledged by the opposition division which indeed suggested on page 12 of the decision four different ways to select the reference lines required by the measurement of the slope (α) angle. They thus concluded that - contrary to the view of the opposition division and the respondent (opponent) - the person skilled in the art was anyway able to define and measure the slope angle (α) in the whole range covered by the claim, i.e. both in the case of flat or curved surfaces simply applying one of these four measurement approaches. It was also pointed out that in any event the person skilled in the art understood, in view of the underlying technical problem and the specific technical context of the invention, that in the practice the slope angle (α) had to be measured only on the cutting edge region, and that a measurement at this location did not cause any difficulties. Regarding the objection of the opposition division and the respondent (opponent) that since it was not possible to consistently measure the slope angle in case of curved surfaces it was also impossible to determine whether the claimed technical effect was achieved over the full scope of the claim, the appellant (patent proprietor) replied that claim 1 did not mention any technical effect and that, in any event, this was an argument

relating to the assessment of inventive step. Finally, the appellant (patent proprietor) maintained the argument that the objection and the reasoning of the opposition division related to an objection of lack of clarity under Article 84 EPC rather than an objection of lack of sufficient disclosure under Article 83 EPC.

2.3 The Board cannot follow the reasoning of the opposition division and the respondent (opponent):

The Board concurs with the opposition division and the respondent (opponent) that claim 1 encompasses the possibility that the flank surfaces (3,4) are formed from multiple flat and curved surfaces as explicitly stated in paragraph [0028] which cannot be limited to the embodiment in Figure 4b of the contested patent implying only flat surfaces as alleged by the appellant (patent proprietor). In addition no limitation to flat twisted surface can be implied. Furthermore, the Board concurs with the opposition division and the respondent (opponent) that when measuring the slope angle between two flat surfaces resulting in a cross-section in two straight lines this does not certainly cause any problem to the person skilled in the art. The patent does not give any indication regarding which reference line/s should be adopted to measure the slope angle (α) when the third and fourth surfaces (3,4) and/or the adjacent twisted surfaces (10) are curved. However, as acknowledged by the opposition in the third paragraph of page 12, lines 7-12 of the appealed decision, the person skilled in the art is aware of several possibilities to choose the reference lines and thus to measure the slope angle (α) accordingly also in the case of curved surfaces. It is true that the patent does not give any indication regarding which one of the possible reference lines should be adopted.

Nevertheless, the person skilled in the art is able to measure the slope angle (α) by adopting any one of these possible reference lines and hence to manufacture a replaceable-blade cutting insert according to the invention without undue burden and within the entire scope of the claim, i.e. irrespective of whether the surfaces are flat (as shown in the Figures) or formed by multiple flat or curved surfaces. The fact that the claim (and the whole application) leaves fully open how the angle has to be measured in the case of curved surfaces to meet feature (D), i.e. which reference line has to be adopted for the measurement, only results in a broad scope of the claim rather than in a lack of disclosure. The fact that the claim and in particular feature (D) is broadly formulated because it leaves fully open which reference line/s has/have to be adopted for the measurement of the slope angle (α) when the third and fourth surfaces (3,4) and/or the twisted surfaces are curved is a circumstance to be duly considered when assessing patentability, i.e. when comparing the subject-matter of such a broad claim 1 according to the main request A with the available prior art to assess compliance with the requirements of novelty and inventive step within the meaning of Articles 54 and 56 EPC respectively. Finally, the Board agrees with the appellant (patent proprietor) that claim 1 does not mention any technical effect and that, in any case, the question whether a technical effect is achieved or not depending on the method/reference line adopted to measure the slope angle (α) in case of curved surfaces, is a point which may become relevant only for the assessment of inventive step.

2.4 In view of all the above, the decision of the opposition division has to be set aside.

REMITTAL

3. The Board notes that the conclusion of the opposition division that the main request does not introduce added subject-matter (Article 100(c) and 123(2) EPC) was not challenged by the respondent in appeal proceedings. The Board thus sees no reason to question this conclusion. However, novelty and inventive step have not been considered by the opposition division in their decision. Moreover, both parties requested to remit the case to the department of the first instance in the event that the Board would come to the conclusion that the main request A - contrary to the assessment of the opposition division - complied with the requirements of Article 83 EPC. The Board considers these circumstances to represent "*special reasons*" within the meaning of Article 11 RPBA and therefore, in the exercise of the discretion provided by Article 111(1) EPC, decided to remit the case to the opposition division for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



H. Jenney

G. Pricolo

Decision electronically authenticated