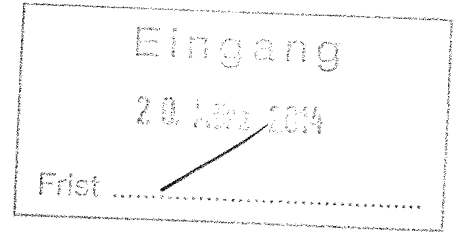


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Date	19.03.14
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Reference 0608-71147EP/AP	Application No./Patent No. 10844640.2 - 1709 / 2529868 PCT/JP2010064702
Applicant/Proprietor Kyocera Corporation	

Communication

The extended European search report is enclosed.

The extended European search report includes, pursuant to Rule 62 EPC, the supplementary European search report (Art. 153(7) EPC) and the European search opinion.

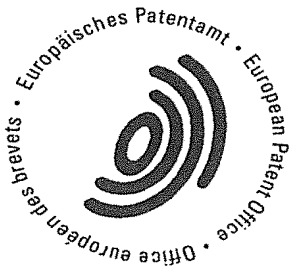
Copies of documents cited in the European search report are attached.

- 1 additional set(s) of copies of such documents is (are) enclosed as well.

Refund of the search fee

If applicable under Article 9 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.

Should you wish to further prosecute this application in the examination phase, your attention is drawn to the provisions of Rule 70a EPC. An invitation to respond to the extended European search report will be issued shortly (R. 70(2) EPC).



**SUPPLEMENTARY
EUROPEAN SEARCH REPORT**

Application Number
EP 10 84 4640

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
✓ E	EP 2 436 465 A1 (KYOCERA CORP [JP]) 4 April 2012 (2012-04-04) * paragraph [0012] - paragraph [0054] * * figures 1-9 *	1, 13, 17	INV. B23C5/20 B23B27/00 B23B27/14 B23C3/00 B23C5/06
✓ E	EP 2 446 992 A1 (KYOCERA CORP [JP]) 2 May 2012 (2012-05-02) * paragraph [0014] - paragraph [0088] * * figures 1-15 *	1, 13, 17	
✓ E	EP 2 396 133 A1 (TDY IND INC [US]) 21 December 2011 (2011-12-21) * paragraph [0025] - paragraph [0079] * * figures 1-11 *	1, 13, 17	
✓ E	EP 2 495 060 A1 (KYOCERA CORP [JP]) 5 September 2012 (2012-09-05) * paragraph [0013] - paragraph [0086] * * figures 1-14 *	1, 13, 17	
A	JP 2009 208172 A (KYOCERA CORP) 17 September 2009 (2009-09-17)	1-17	TECHNICAL FIELDS SEARCHED (IPC) B23C

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

1

EPO FORM 1503 03.82 (F04C04)

Place of search The Hague	Date of completion of the search 13 March 2014	Examiner Mioc, Marius
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 84 4640

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-03-2014

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 2436465	A1	04-04-2012	CN 102413972 A	11-04-2012
			EP 2436465 A1	04-04-2012
			JP 5357963 B2	04-12-2013
			US 2012045289 A1	23-02-2012
			WO 2010137663 A1	02-12-2010

EP 2446992	A1	02-05-2012	CN 102427904 A	25-04-2012
			EP 2446992 A1	02-05-2012
			JP 5346373 B2	20-11-2013
			US 2012070240 A1	22-03-2012
			WO 2010150907 A1	29-12-2010

EP 2396133	A1	21-12-2011	CA 2749711 A1	19-08-2010
			CN 102361719 A	22-02-2012
			EP 2396133 A1	21-12-2011
			TW 201043365 A	16-12-2010
			US 2010202839 A1	12-08-2010
			WO 2010093488 A1	19-08-2010

EP 2495060	A1	05-09-2012	CN 102548694 A	04-07-2012
			EP 2495060 A1	05-09-2012
			US 2012189396 A1	26-07-2012
			WO 2011052340 A1	05-05-2011

JP 2009208172	A	17-09-2009	NONE	

The examination is being carried out on the **following application documents**

Description, Pages

1-29 as published

Claims, Numbers

1-17 as published

Drawings, Sheets

1/7-7/7 as published

- 1 Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure.
 - D1 EP 2 436 465 A1 (KYOCERA CORP) 4 April 2012
 - D2 EP 2 446 992 A1 (KYOCERA CORP) 2 May 2012
 - D3 EP 2 396 133 A1 (TDY IND INC) 21 December 2011
- 2 D1 published on 4 April 2012 claims the priority date of 30 July 2009.

Its content as filed is therefore considered to be comprised in the state of the art relevant to the question of novelty, pursuant to Article 54(3) EPC.
- 2.1 This earlier application shows:
 - a cutting insert (1), comprising:
 - an upper surface (2);
 - a lower surface (3);
 - a side surface (4) which is connected to the upper surface (2) and the lower surface (3), and comprises a first side surface and a second side surface in order (see figs. 1 and 2); and
 - a cutting edge (5) comprises
 - a first flat cutting edge (52) and a first major cutting edge (51) in order in an intersection region of the first side surface and the upper surface, and
 - a second flat cutting edge and a second major cutting edge in order (the same edges like above, but corresponding to the next indexing position; see figs. 1 and 2) in an intersection region of the second side surface and the upper surface, wherein

the first side surface comprises a first chamfered side surface with a curved shape (the side surface corresponding to the edge 511; fig. 2a,b), a first corner side surface with a planar shape (the side surface corresponding to the edge 52; fig. 2a,b), and a first major side surface in order (see figs. 1 and 2), the second side surface comprises a second chamfered side surface with a curved shape, a second corner side surface with a planar shape, and a second major side surface in order (the same surfaces like for the first side surface, but corresponding to the next indexing position; see figs. 1 and 2), the intersection region of the second side surface and the upper surface comprises

a first intersection region of the second chamfered side surface and the upper surface (see figs. 1 and 2), and

a second intersection region of the second corner side surface and the upper surface (see figs. 1 and 2), and

the second flat cutting edge (52) which is located from the first intersection region to the second intersection region, and has a lowermost portion in the first intersection region in a side view (fig. 2b).

Thus, it is prejudicial to the novelty of the subject-matter of claims 1-17 of the present application.

- 2.2 Similar objections regarding the novelty of claim 1 can be raised based on any of documents D2-D4.
- 2.3 Independent method claim 17, relates to a normal use of the apparatus of claim 1. Consequently, mutatis mutandis, the same considerations as per claim 1 apply and the subject-matter of claim 17 is considered not new.
- 2.4 The subject-matter of dependent claim 13 is disclosed in document D1 (see fig. 6).
- 3 The applicant is invited to file new claims which take account of the above comments.
- 3.1 The features of any newly drafted claim should be provided with reference signs placed in parentheses to increase the intelligibility of the claims (Rule 43 (7) EPC). This applies to both the preamble and characterising portion.
- 3.2 Independent claims 1 and 17 are not in the two - part form in accordance with Rule 43(1) EPC, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 43(1)(a) EPC) and the remaining features being included in the characterising part (Rule 43(1)(b) EPC).

Any newly-filed claim should therefore be drafted accordingly.

- 3.3 When filing new claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and of any statements of problem or advantage, not to add subject - matter which extends beyond the content of the application as originally filed (Article 123(2) EPC).
- 3.4 To meet the requirements of Rule 42(1)(b) EPC, the document D1 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.
- 3.5 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC during substantive examination, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based.
- If the applicant considers it appropriate, these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.
- 3.6 Amendments should be made by filing replacement pages. Unnecessary recasting of the description should be avoided. An amended abstract is not required. The applicant should also take account of the requirements of Rule 50(1) EPC. If handwritten amendments are submitted, they should be clearly legible to the printer.