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(54) Title: AN INDEXABLE DRILL INSERT

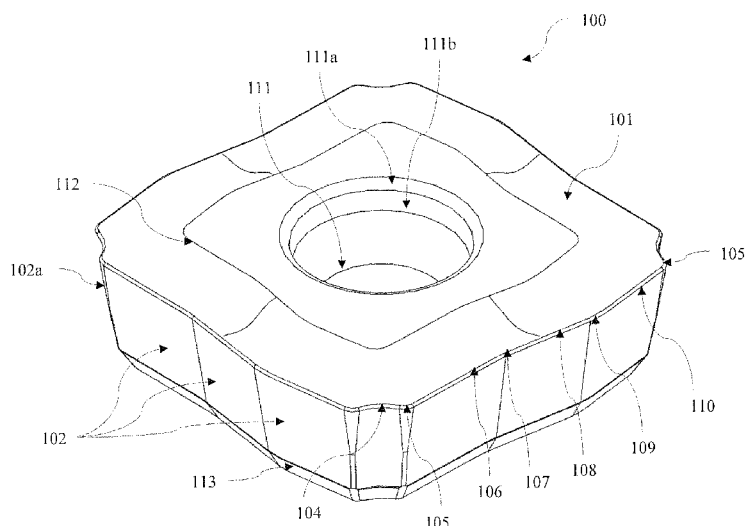


FIG. 1

(57) Abstract: The present disclosure provides a quadrangular indexable drill insert comprising a substantially flat top surface and bottom surface, a side surface adjoining the top and bottom surfaces; four identical cutting edges formed at intersection of side surface and top surface, each cutting edge comprising, a concave curved part edge of predetermined radius at corner of the insert; a first part edge oriented towards axis of drill body and is having negative slope, said first part edge is connected to the concave curved part edge through a nose portion; a second part edge connected to first part edge through a transitional edge, said second part edge is tangentially oriented to an imaginary inscribed circle; a third part edge connected to the second part edge through a transitional edge, and a nose portion of adjoining part edge of succeeding cutting edge.



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PCT/US2012/046576**A. CLASSIFICATION OF SUBJECT MATTER*****B23B 51/02(2006.01)i, B23B 51/08(2006.01)i, B23C 5/20(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B23B 51/02; B23P 15/28; B23B 27/16; B23B 27/14; B23B 51/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: indexable, insert, cutting, edge, part, body and hole.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010-0178122 A1 (BAE, BYUNG GYUN) 15 July 2010 See abstract, paragraphs [0023] - [0038] and figs. 4, 6, 9.	1-13
Y	US 6712563 B2 (MAIER, HANS) 30 March 2004 See abstract, column 3, line 16 - column 4, line 18 and fig. 2.	1-13
A	EP 1813368 A2 (SANDVIK INTELLECTUAL PROPERTY AB) 01 August 2007 See abstract and figs. 1-8.	1-13
A	EP 1902799 A2 (SANDVIK INTELLECTUAL PROPERTY AB) 26 March 2008 See abstract and figs. 1-8.	1-13

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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