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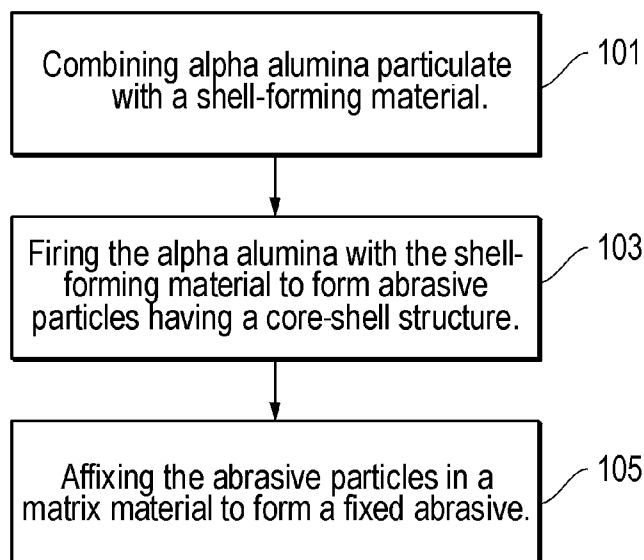
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HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,  
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,  
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MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR),

[Continued on next page]

(54) Title: FIXED ABRASIVE ARTICLES UTILIZING COATED ABRASIVE PARTICLES



(57) Abstract: An fixed abrasive article is provided which includes a matrix material and abrasive particles embedded within the matrix material. The abrasive particles have a core-shell structure that includes a polycrystalline alpha alumina core and a shell layer overlying the polycrystalline alpha alumina core. The shell layer includes a material selected from the group consisting of silicon oxide and zirconium oxide. Also the polycrystalline alpha alumina core includes grains and having an average grain size of not greater than about 500 nm.

FIG. 1



OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
MR, NE, SN, TD, TG).

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**A. CLASSIFICATION OF SUBJECT MATTER*****B24D 3/28(2006.01)i, C09K 3/14(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)

IPC 8: B24D 3/28, C09K 3/14

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 since 1975

Japanese Utility models and applications for Utility models since 1975

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

eKIPASS (KIPO internal)&amp;keywords: "grain", "coating"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/0129975 A1 (IHARA, E.) 16 June 2005 See abstract and Figures 1 & 2	1-15
A	US 2005/0050802 A1 (WURZER, T.; SKALE, F.) 10 March 2005 See abstract and claims	1-15
A	US 6773475 B2 (OHISHI, M.) 10 August 2004 See abstract and Figure 1	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

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