CUTTING TOOL BODY HAVING TUNGSTEN DISULFIDE COATING AND METHOD FOR ACCOMPLISHING SAME

Abstract: A method of manufacturing a tool body of a cutting tool comprises mechanically shaping the tool body to provide a metal surface on the tool body having a first surface characteristic. Thereafter, the metal surface is chemically treated with a metal reactant to create a relatively soft metal film along the metal surface. This soft metal film is removed via burnishing or other appropriate action to smooth the metal surface. After the surface is smoothed, the metal surface is then roughened to prepare the surface for the receipt of tungsten disulfide. The roughened metal surface is coated with tungsten disulfide. A cutting tool is disclosed that comprises a tool body defining a substantially isotropic surface having pits formed therein, and tungsten disulfide particles filled into the pits.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : C23C 14/22
US CL. : 148/217
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)
U.S. : 148/217

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST text search: "cutting tool" and roughening

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</table>

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

Special categories of cited documents:
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Date of the actual completion of the international search: 29 September 2004
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