

Title (en)
BONDING PROCESS FOR GRINDING TOOLS

Publication
EP 0004449 B1 19811230 (EN)

Application
EP 79300429 A 19790319

Priority
US 88808178 A 19780320

Abstract (en)
[origin: EP0004449A2] A bonding process for grinding tools in which a metallic workpiece (10) is pre-etched (14) to form cavities in the surface of the workpiece for individually receiving abrasive particles to be bonded thereto. The etched workpiece is at least partially embedded in a layer (46) of the abrasive particles in a first plating bath (20) comprising an aqueous solution of metal ions (22) and an electromotive force is imposed across the workpiece and an anode (34) so that the abrasive particles become partially embedded in the cavities in the workpiece surface as metal is plated on to the surface and around the abrasive particles adjacent to the surface. A second plating of metal in a second plating bath (40) securely bonds the particles to the workpiece and can provide the workpiece with a predetermined hardness for a particular application. The dual bonding process can be repeated for each layer to make multi-layered tools.

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