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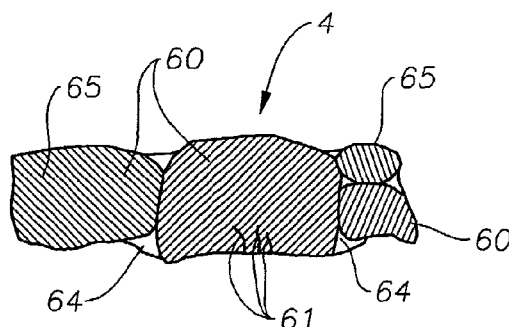
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(54) Title: POLYCRYSTALLINE MATERIAL ELEMENT WITH IMPROVED WEAR RESISTANCE AND METHODS OF MANUFACTURE THEREOF



(57) Abstract: The present invention provides a superhard polycrystalline diamond or diamond-like element with improved wear resistance. Collectively called PCD elements for the purposes of this specification, these elements are formed with a binder-catalyzing material in a high-temperature, high-pressure (HTHP) process. The diamond material is formed and integrally bonded to a substrate containing the catalyzing material during the HTHP process. The diamond body so formed has a working surface, a plurality of crystal being exposed at the working surface, and wherein the exposed crystals are substantially free of microfractures. The exposed parts of the exposed crystals are of rounded or domed form.



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