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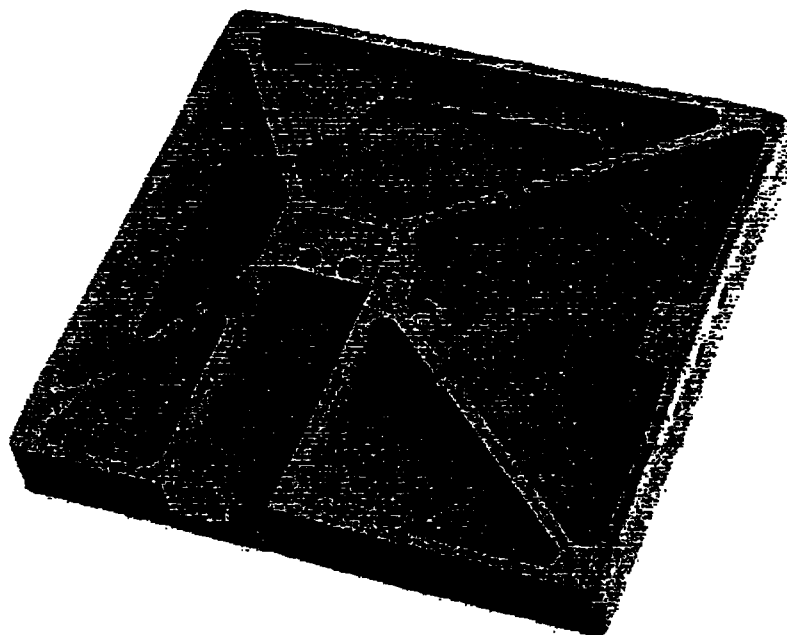
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(54) Title: SILICON CARBIDE COMPOSITES AND METHODS FOR MAKING SAME



(57) Abstract: Improved silicon carbide composites made by an infiltration process feature a metal phase in addition to any residual silicon phase. Not only are properties such as mechanical toughness improved, but the infiltrant can be so engineered as to have much diminished amounts of expansion upon solidification, thereby enhancing net-shape-making capabilities. Further, multi-component infiltrant materials may have a lower liquidus temperature than pure silicon, thereby providing the practitioner with greater control over the infiltration process. In particular, the infiltration may be conducted at the lower temperatures, where low-cost but effective bedding or barrier materials can terminate the infiltration process once the infiltrant has migrated through the permeable mass up to the boundary

between the mass and the bedding material.



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