Microstructure, tribological response, and mechanical properties of fiber bonded silicon carbide ceramics

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MICROSTRUCTURE, TRIBOLOGICAL RESPONSE, AND MECHANICAL PROPERTIES OF FIBER BONDED SILICON CARBIDE CERAMICS

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Fiber bonded Silicon carbide Ceramics

Sheets of Si-Al-C-O amorphous fibers

SA-Tyrannohex™ (Ube Industries, Ltd.)

Hot-pressing

Fiber bonded SiC ceramics
Main Results

Microstructural Stability:

-Thermal treatments in vacuum at temperatures ranging 1400-2000°C during 5-30 h

Mechanical Properties:

- Hardness
- Tribological response

Fiber bonded SiC ceramics
Thanks