Nome entità: CoorsTek Sweden AB

Nome caso: Glass encapsulated HIP

Abstract: Glass encapsulated Hot Isostatic Pressing (HIP) enables the manufacturing of complicated shaped components from ceramics and other powders to high density and to near net size. The glass encapsulation of the powder compacts acts as a barrier for the Argon gas from penetrating the powder body, and transmitting the pressure to densify the powder, due to the soft state of the glass at high temperature.

This enables the sintering of complicated shapes to near net sizes, reducing the need for further machining steps, which can be both expensive and potentially inducing negative surface effects for certain ceramic materials.

The glass HIP technology has been used successfully to high pressure sinter ceramics to near net shapes in materials such as Silicon Nitride and Boron Carbide to name a few, and in shapes as complicated as turbine wheels for turbo units.

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