ABSTRACT

METHOD OF MAKING METALLIC COMPOSITE FOAM COMPONENTS

A method of producing a metallic composite component or a blade for a gas turbine engine includes: providing a core of a ceramic or metallic foam material; disposing the core in a mold having a cavity defining the exterior contour of the component or blade includes; injecting the mixture into the mold so as to penetrate the intracellular volume of the foam; removing a majority of the binder from the preform; and heating the preform to remove the remainder of the binder and sinter the metal powder together to form the finished component or blade. A preform for a metallic composite component includes a core of a foam material having ceramic or metallic cell walls with intracellular volume therebetween. The core defines at least a portion of the exterior contour of the component. A mixture of a metallic powder and a binder is disposed in the intracellular volume.

Figure 7