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THE STUDY OF A 4D RADIAL-ROD LOW EROSION FINE WOVEN C/C COMPOSITE

**Abstract**

To decrease the ablation of nozzle throats of SRM we develop a 4D Radial-rod fine Woven C/C Composite. In the paper, Compared with the 4D Radial-rod coarse woven C/C Composite, finer weave network and more suitable architecture parameters are designed, therefore the bulk density and fiber volume of the perform are increased. A hoop tensile strength measurement method is introduced, theory of low ablation is also studied, due to technical efforts of preform and densification process introduced, ablation rate decreases more than 40 percent and mechanical properties improved greatly.