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**CREEP EVALUATION OF Ti-6Al-4V ALLOY WITH SiC THIN FILM AT 600 °C**

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In this work was evaluated Ti-6Al-4V creep behaviour after the alloy to be covered with SiC thin film by HiPIMS (High Power Impulse Magnetron Sputtering) technique. This coating technique was used to protect the alloy surface against the oxygen action, since Ti-6Al-4V present high affinity to certain chemical elements such as oxygen. The samples were submitted a creep mechanical tests at temperature 600 °C and stress conditions of 125, 250 and 319 MPa. Strain versus time graphics were obtained after the creep test and surface fracture images were analysed by SEM. The results showed an improvement in the Ti-6Al-4V lifetime in this temperature when compared with the same alloy without SiC coating. The fracture images showed a ductile fracture with dimples.