[Goyal, 6(6): June 2019]
DOI- 10.5281/zenodo.3246625

ISSN 2348 – 8034
Impact Factor- 5.070

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

PARAMETRIC ANALYSIS FOR THE DEVELOPMENT OF COPPER SILICON CARBIDE METAL MATRIX COMPOSITES USING STIR CASTING

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ABSTRACT

Smart materials are in picture due to the requirement of light weight and high strength material having good mechanical properties for different application. Copper material composite acquire all the requirement properties for the applications. Copper Silicon Carbide composite material made using stir casting investigation is carried out to check different properties of Cu-SiC Particulate Reinforced Metal Matrix Composites. Also machining parameters are checked for the application of PRMMC in industry. Copper (Cu) has a better thermal conductivity than aluminum (Al), therefore, copper should be the best candidate as thermal material. With the presence of silicon carbide (SiC) as reinforcement, copper silicon carbide should be able to perform better as a heat spreader or a heat sink than aluminum silicon carbide (AlSiC) metal matrix composite.

Keywords*: Copper (Cu), Silicon Carbide (SiC), Stir Casting, Composites.*