

ABSTRACT

Aluminum Metal Matrix composites (AMMC) refer to a relatively recent class of aluminum alloy-based composites having an emphasis on lightweight and high performance. Compared to other MMC composites, AMMC has advantages like improved strength, higher stiffness, high-temperature properties, wear resistance, increased damping capacity coupled with a reduction in density. Applications of AMMC encompass a wide range of industrial components for automobile, aerospace, nuclear and electronic industries due to their above mentioned attractive properties. All Metal Matrix Composites are new materials which are a combination of molten metal called matrix and strengthening particles called reinforcement. This Project reveals the reinforcement of Zinc and SiC with Aluminium alloy (8011) with a specific ratio using stir casting technique to fabricate MMC. Here, Mechanical property namely tensile strength, hardness and impact strength are evaluated along with the microstructural analysis in SEM Apparatus under room temperature condition.

OBJECTIVE

- To increase tensile strength
- To increase surface hardness
- To improve strength by weight ratio
- To reduce material cost
- To enhance microstructural property