ABSTRACT

Magnesium Metal Matrix composites (MMMC) refer to a relatively recent class of Magnesium alloy-based composites having an emphasis on lightweight and high performance. Compared to other MMC composites, MMMC has advantages like improved strength, higher stiffness, high-temperature properties, wear resistance, increased damping capacity coupled with a reduction in density. Applications of MMMC encompass a wide range of industrial components for automobile, aerospace, marine 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 B4C and Sic with Magnesium alloy (AZ91) with a specific ratio using stir casting technique to fabricate MMC. Here, Mechanical property namely hardness, wear, corrosion, are evaluated along with the microstructural analysis in SEM Apparatus under room temperature condition.

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