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Al6061 Alloy Based Metal Matrix Composite Materials

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Abstract: *The utilization of aluminum alloys has significantly increased in recent years, particularly in the automobile industry, due to their low weight, density, coefficient of thermal expansion, and high strength and wear resistance. Among the materials of interest in Tribology, aluminum metal matrix composites have garnered significant attention for both practical and fundamental reasons. These composites have found numerous applications in manufacturing various components of automotive engines. Compound workpieces are developed by combining the advantageous properties of different materials. Composite materials are widely used in both domestic and industrial production. The reduction of weight and wear in rapidly moving parts of automobile engines, such as crankshafts and connecting rods, is a primary objective. This review paper examines recent advancements in composite technology, performance behavior, and the analysis of metal matrix composites. The paper specifically focuses on composites made by combining aluminum with non-metal materials, highlighting their mechanical properties and fabrication techniques..*

Keywords: aluminium alloys, boron carbide, fabrication technique, MMC

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