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# **Development of Zinc Metal Matrix Composites by using Silicon Carbide and Industrial Waste Metallic Chips**

Priyanka V. Kadam<sup>1</sup>, Suraj K. Pangarkar<sup>2</sup>, Prashant B. Yelmame<sup>3</sup>, Sushrut B. Raijade<sup>4</sup> Faculty, Mechanical Engineering Department, Guru Gobind Singh Polytechnic, Nashik<sup>1</sup> Faculty, Mechanical Engineering Department, K. K. Wagh Polytechnic, Nashik<sup>2,3,4</sup>

Abstract: In the records of substances, the layout and production procedures of the composite substances is the maximum superior thing. Steel, aluminum, magnesium, copper, plastics are the substances utilized in car industries for making numerous components and components in numerous industries. These substances are strong, stiff, have excellent formability. But, there are some obstacles with those substances as negative corrosion resistance, extra weight, negative warmth dissipation capability, low tensile power and low hardness. These obstacles can additionally cause harm the unique element and wishes a replacement once more and once more. To overcome those problems, the improvement of composite substances in addition to the related layout and production technology is one of the maximum essential advances in the records of substances. Composites are aggregate of substances having mechanical and bodily houses which may be tailor-made to satisfy the necessities of a specific application. These particular traits of composites offer the mechanical engineer with layout possibilities not feasible with traditional monolithic substances. The Metal Matrix Composites (MMCs) are essential substances that are now used widely, with inside the aerospace enterprise in addition to in a big and growing range of mechanical engineering applications, together with inner combustion engines, gadget components, aircraft systems and mechanical components, together with brakes, power shafts, flywheels, tanks because of its outstanding houses. Zinc casting alloys are flexible engineering substances due to its excessive effect power in comparison to different alloys and best zinc alloys offer excellent power alongside the sturdiness to the fabric. Also, Zinc alloys are possible matrix substances attributable to their excellent put on houses, decrease casting temperatures and decrease cost. The reinforcements just like the silicon carbide powder in training of Zn primarily based totally MMCs offers fabric the more power, more hardness, outstanding chemical resistance, low thermal growth and excessive thermal conductivity. Hence, on this paper Zn-SiC metallic matrix composite is fabricated with the aid of using various the share of silicon carbide and the improved mechanical properties are studied.

*Keywords:* Electric Stir Casting, Mechanical Properties, Nature of Microstructure, Silicon carbide, Zinc Metal Matrix Composites

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