

Experimental Investigation of Microstructure and Mechanical Properties of Aluminium Hybrid Composite Reinforced with Rice Husk and Fly Ash

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Abstract: The application spectrum of low-cost material reinforced metal matrix composites is growing rapidly in various engineering fields due to their superior mechanical properties. In the present study aluminium alloy is reinforced with locally available inexpensive rice husk ash (RHA) and fly ash (FA) for developing a new hybrid composite material. A rice husk ash and fly ash particles of 5, 10 and 15% each by weight are added to develop metal matrix composites using liquid metal processing route. The surface morphology was studied using scanning electron microscope. The mechanical properties such as tensile strength, hardness and percentage elongations were studied for the all-test specimens.

Keywords: Hybrid Composite Material, Aluminium Composite, Rice Husk, Fly Ash, Mechanical Properties, Electron Microscope.

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