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Wear and Friction Characteristics of Aluminium Matrix Composites Reinforced With Flyash/Cu/Gr Particles

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Abstract:The present paper has been focused on the use of fly ash, graphite and copper in a valuable way by reinforcing it into aluminium alloy Al6061 to produce a composite by stir casting technique. By using Taguchi's orthogonal array an attempt has been made to study for optimizing the percentage composition of aluminium alloy Al6061 reinforced with fly ash, graphite and copper. The mechanical property studied is wear resistance and friction characteristics. Taguchi's $L_4 (2^3)$ orthogonal array is used to plan the experimentation and four compositions of aluminium matrix composites were produced and the samples prepared for testing. The experimental results showed significant changes in each composition and wear resistance was improved.

Keywords:Al6061, fly ash, graphite, copper, Taguchi, wear, friction.

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