

**Abstract:** A metallic matrix composite, with AlSi9Cu3 matrix reinforced with 5% copper coated graphite (GrCu) was processed in semi solid state by centrifugal casting. This technique allows the uniform controlled distribution of the reinforcing material to provide improved tribological properties in certain area. The graphite particles were copper coated for a better embedding in the matrix. The microstructure evolution revealed compounds containing Mn, Si and Mg in the matrix alloy and the final composite and controlled distribution of the copper coated graphite as reinforcing material. The hardness measurement showed 48% improvement towards the matrix alloy and the Young modulus showed 27% improvement. The friction coefficient and wear rate obtained revealed a very good and promising behavior of the composite processed in semi solid state for ball bearings ring application