Mechanical Characterization of Al-Sicp– Fly Ash Composites

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***Abstract*-Al-SiC_p-fly ash hybrid metal matrix composites have been prepared by fixing the percentage of SiC_p (5%) and varying the percentage of fly-ash (5%, 10 % and 15% by weight) using stir casting technique. Three cylindrical samples have been prepared of 20 mm diameter. Tensile and compression specimens were made by machining as per standards and tested in Universal Testing Machine for evaluation of strength in tension and length of compression till fracture. Hardness of the specimens was measured by Brinell hardness tester. From the results obtained it has been observed that the tensile strength of these specimens increase with increase in the percentage of fly ash. Similarly the compressive strength also increases as force required for compression is higher for higher percentages of fly ash. Out of the three composites , the composite with 15% fly ash has exhibited reasonable tensile, compressive strengths and moderate hardness. This composite may be used in structural applications where light weight and high strength are the criteria.**

***Key words*- Aluminium, Silicon carbide particles, Fly Ash, Composites, Tensile strength, Compression tests**

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