ABSTRACT

Metal matrix composites (MMC) have attracted interest for application in numerous fields. Current available processing method have given many problems in the production metal matrix composites. Generally, the main problems that were normally found are the distribution of reinforcement materials and the wettability between reinforcement material and matrix alloy in cast alumunium metal matrix composites. In this study, cast A356/Al2O3p composites were produced by semisolid metal processing (combination of mechanical stirring and cooling slope casting). The microstructures, Scanning Electron Microscopy (SEM) and Energy Dispersive X-ray (EDX) data were analysed. The work was successful in producing MMC feedstock suitable for semisolid metal processing while SEM/ EDX results show the existence of reinforcement in the ingots.

Keywords: Metal matrix composite, semi-solid metal processing, cooling slope casting