

## **The Effect of Increase in Aluminium Content on Fluidity of ZA Alloys Processed by Centrifugal Casting**

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**Abstract :** Uses of ZA alloys as bearing material have been increased due to their superior mechanical properties, wear characteristics and tribological properties. Among ZA alloys, ZA 27 alloy has higher strength, low density with excellent bearing and wear characteristics. From the past research work, it is observed that in continuous casting as Al content increases, the fluidity also increases. In present work, ZA 8, ZA 12 and ZA 27 alloys have been processed through centrifugal casting process at 600 rotational speed of the mould. Uniform full cylinder is casted with ZA 8 alloy. For ZA 12 and ZA 27 alloys where the Al content is higher, cast tubes were not complete and uniform. The reason is Al may be acting as a refiner and reduce the melt flow in the rotating mould. This is mainly due to macro-segregation of Al, which has occurred due to difference in densities of Al and Zn.

**Keywords :** centrifugal casting, metal flow, characterization, systems engineering

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