



International Journal on Recent Researches In Science, Engineering & Technology

(Division of Mechanical Engineering)

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Research Paper

Available online at: www.jrrset.com

ISSN (Print) : 2347-6729

ISSN (Online) : 2348-3105

**Volume 5, Issue 1,
January 2017**

JIR IF : 2.54

DIIF IF : 1.46

SJIF IF: 1.329

Influence of addition of Co on the mechanical properties of Al alloys

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Abstract

The authors have worked on effect of Molybdenum and Cobalt Addition on Micro Structure and Mechanical Properties of Aluminium-12.5%Silicon Alloy. They investigated the influence of cobalt and molybdenum on the structure and mechanical properties. The additions are added as micro additives at various compositions to the percentage of iron present in the alloys. The hardness strength and impact strength were measured using Vickers hardness tester. The chemical composition analysis was conducted using chemical analyzer and microstructure examination was done using metallographic microscope. They concluded that the hardness and impact strength improved as the iron content in the alloy is reduced and the microstructure results reported fine particle distribution. They have considered more than 10 samples and hardness and strength values were tabulated. They have shown the variation of hardness values and impact values with percent composition of Co and Mo. The corresponding microstructure was also reported.